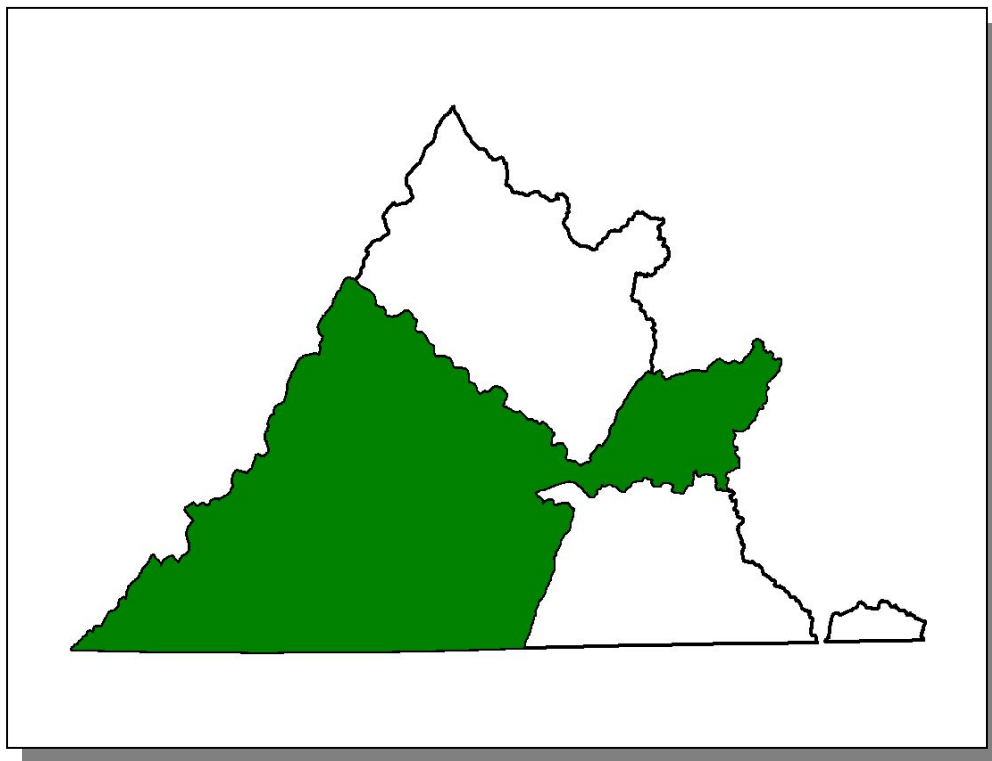
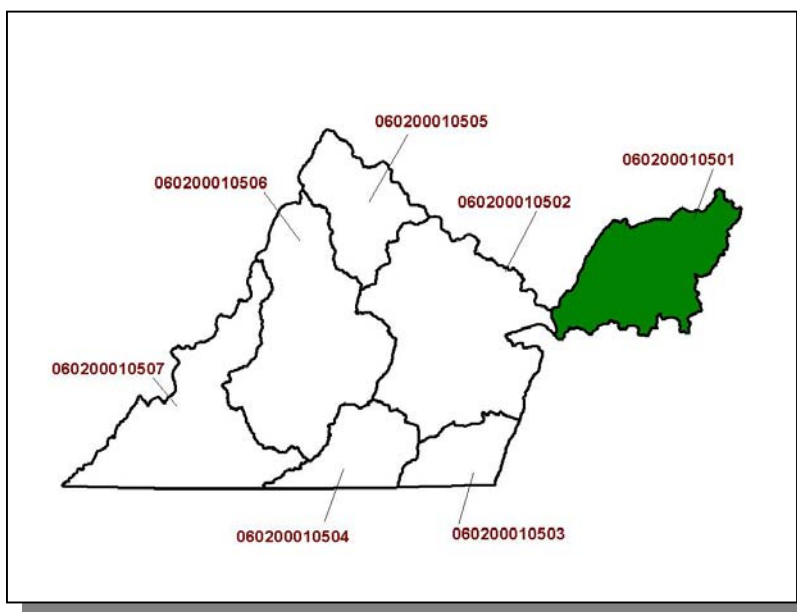


**4.2.A. 0602000105.**



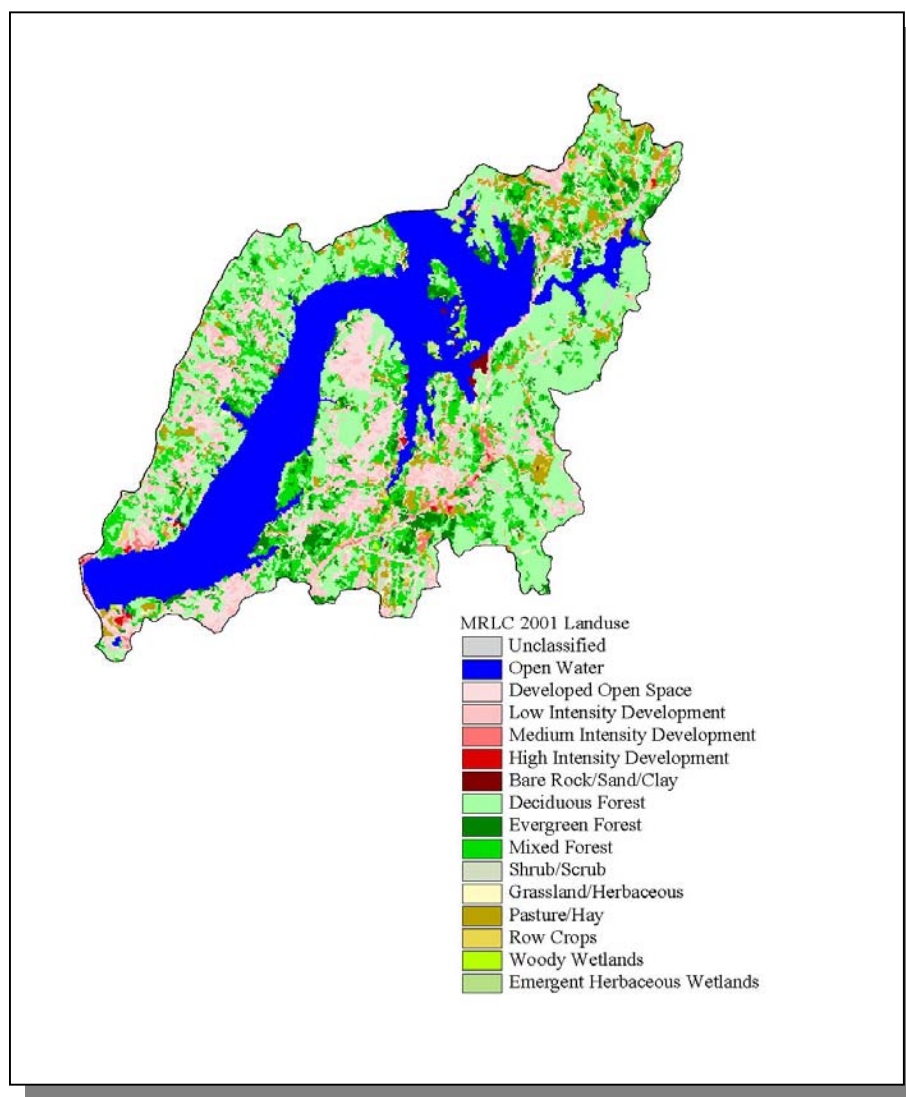
**Figure 4-2. Location of Subwatershed 0602000105.** All Group 4 Lower Tennessee River HUC-10 subwatershed boundaries in Tennessee are shown for reference.

**4.2.A.i. 060200010501 (Tennessee River).**



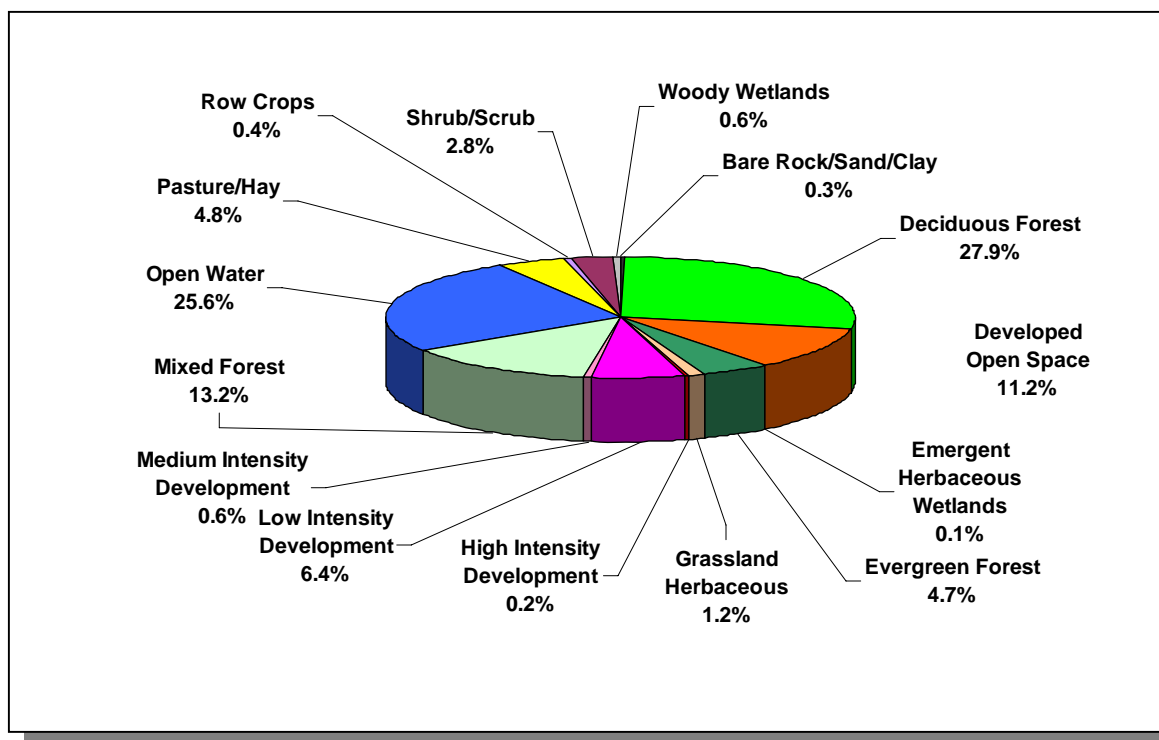
**Figure 4-3. Location of Subwatershed 060200010501.** All Group 4 Lower Tennessee River HUC-12 subwatershed boundaries in Tennessee are shown for reference.

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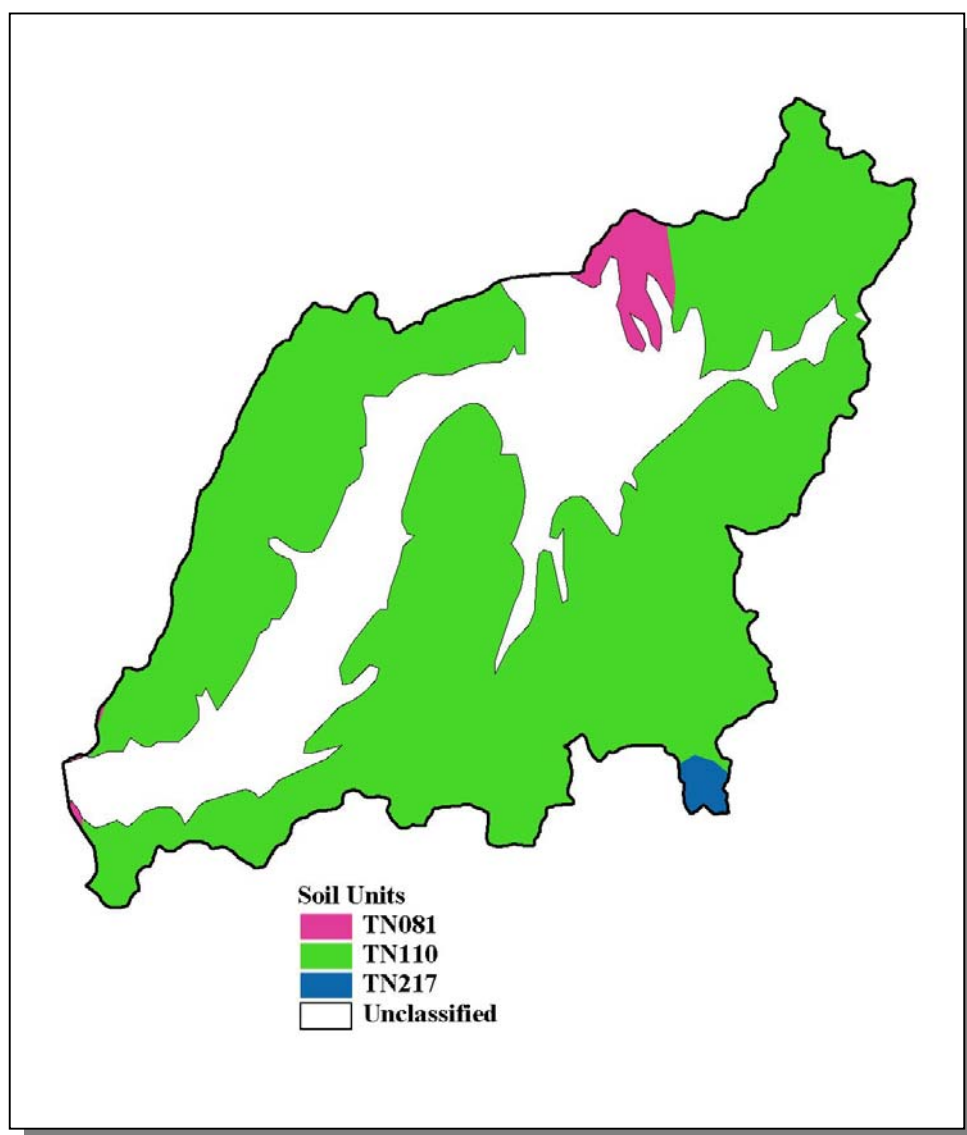


**Figure 4-4. Illustration of Land Use Distribution in Subwatershed 060200010501.**

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**Figure 4-5. Land Use Distribution in Subwatershed 060200010501.** More information is provided in Appendix IV.



**Figure 4-6. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060200010501.**

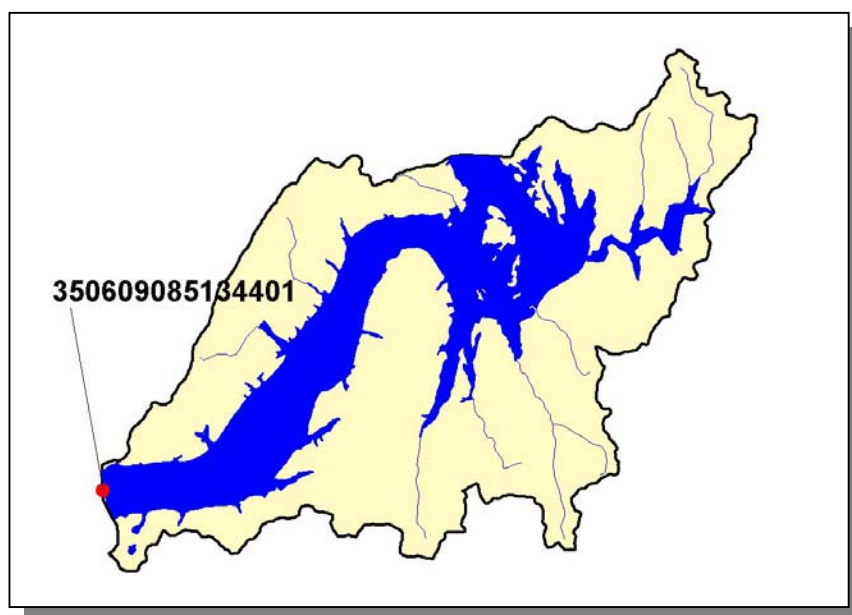
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN081	5.00	C	1.41	5.48	Silty Loam	0.35
TN110	0.00	B	2.22	4.96	Loam	0.31
TN217	0.00	C	2.34	5.32	Loam	0.35

**Table 4-2. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060200010501.** The definition of "Hydrologic Group" is provided in Appendix IV.

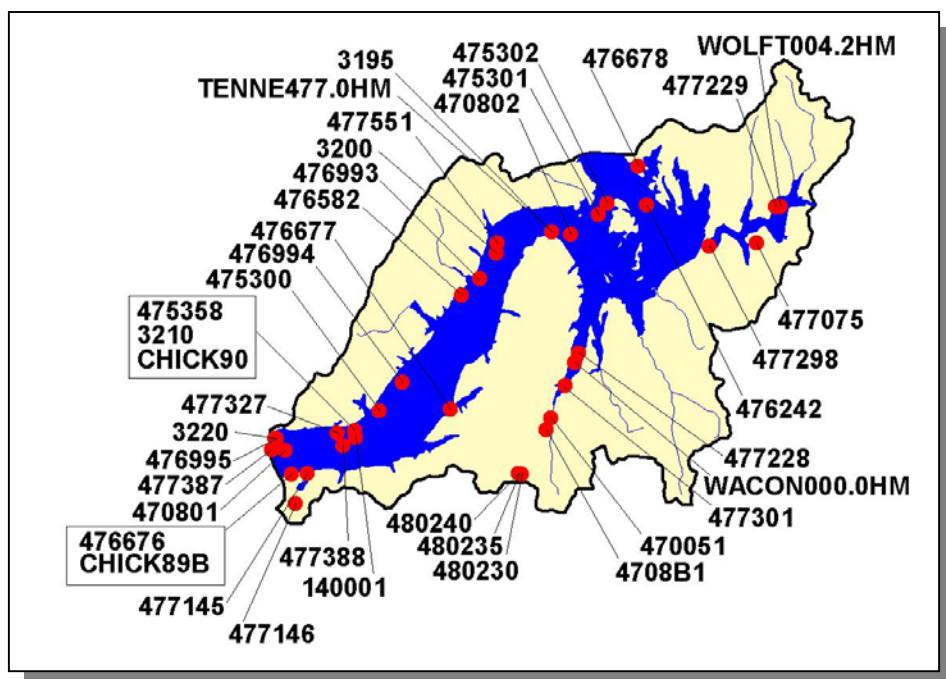
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Hamilton	285,536	294,865	307,896	5.89	16,825	17,375	18,143	7.8

**Table 4-3. Population Estimates in Subwatershed 060200010501.**

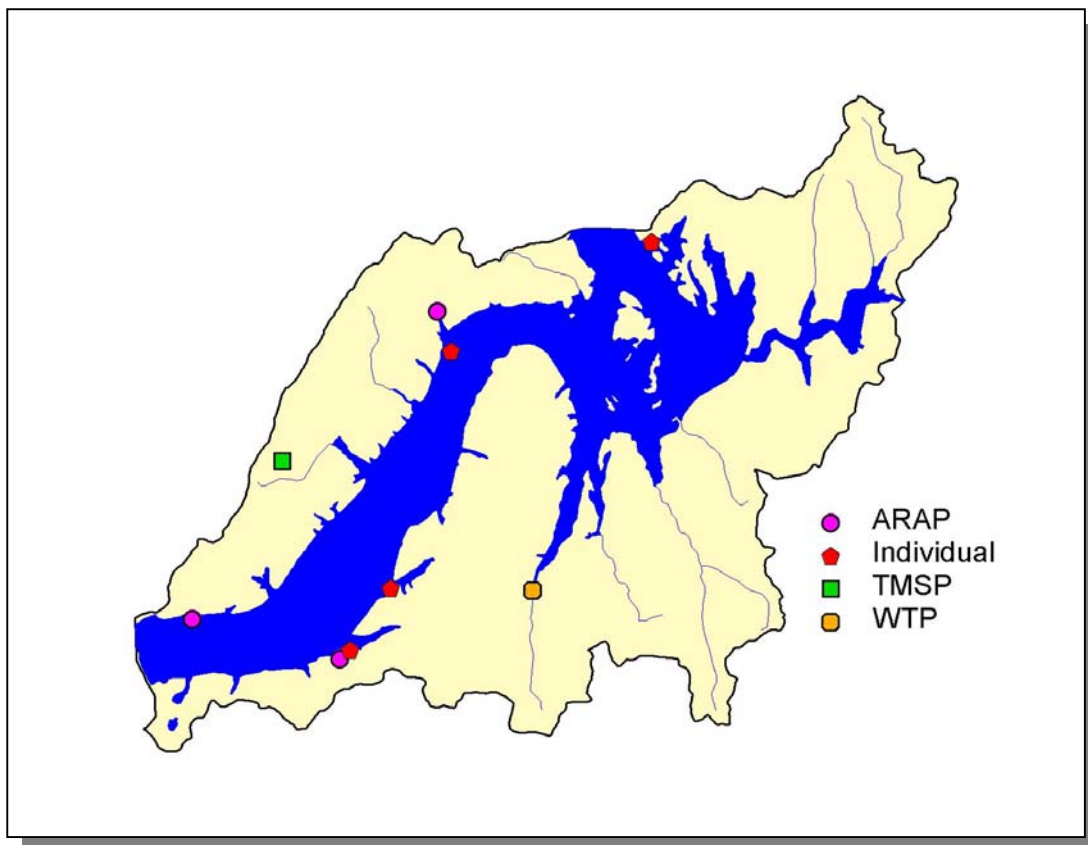


**Figure 4-7. Location of Historical Streamflow Data Collection Sites in Subwatershed 060200010501.** More information is provided in Appendix IV.



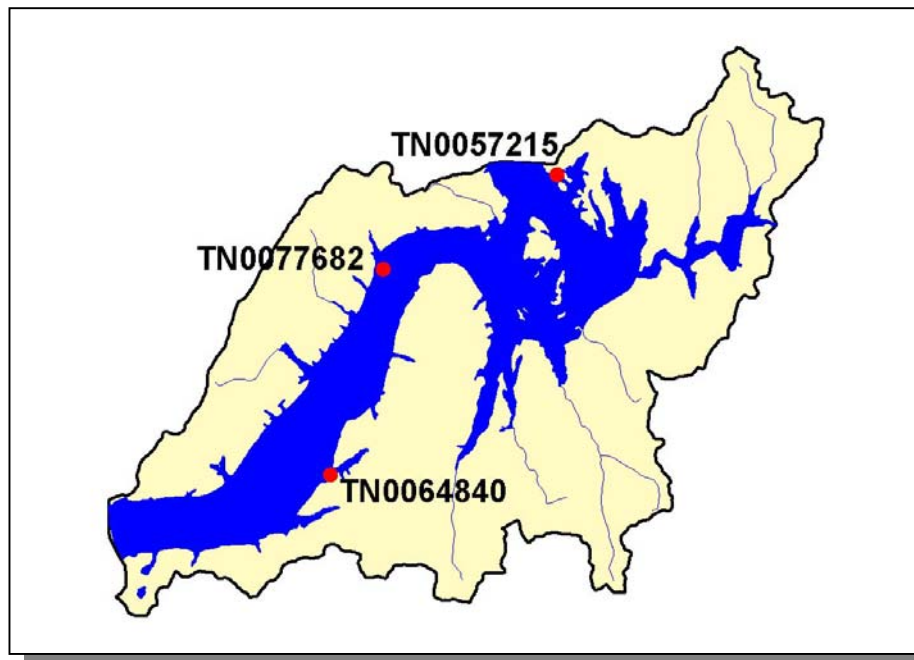
**Figure 4-8. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060200010501.** More information, including site names and locations, and station numbers for sites located in the watershed outside of Tennessee, is provided in Appendix IV.

**4.2.A.i.a. Point Source Contributions.**

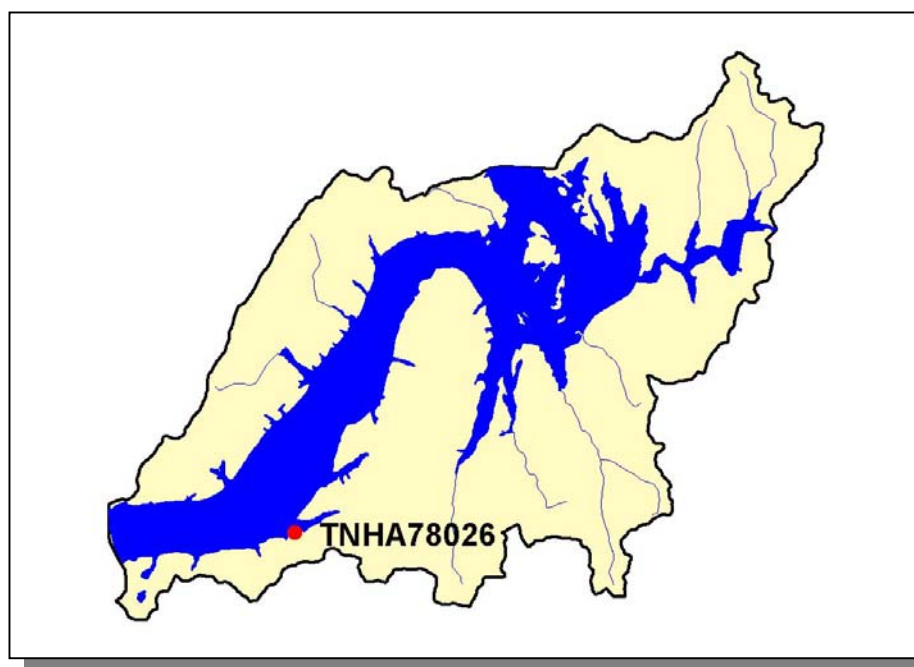


**Figure 4-9. Location of Permits Issued in Subwatershed 060200010501.** More information, including the names of facilities, is provided in Appendix IV.

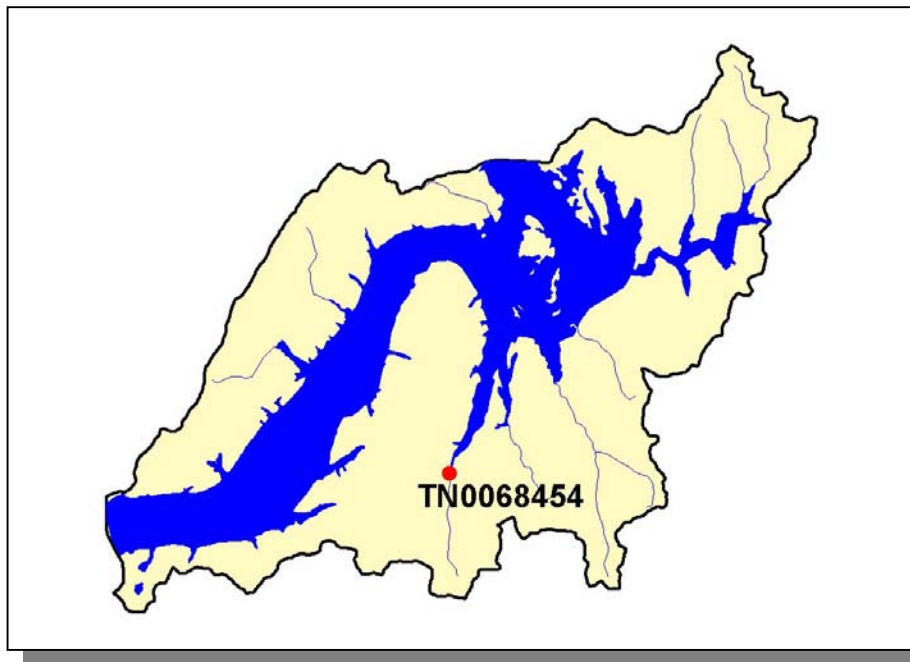




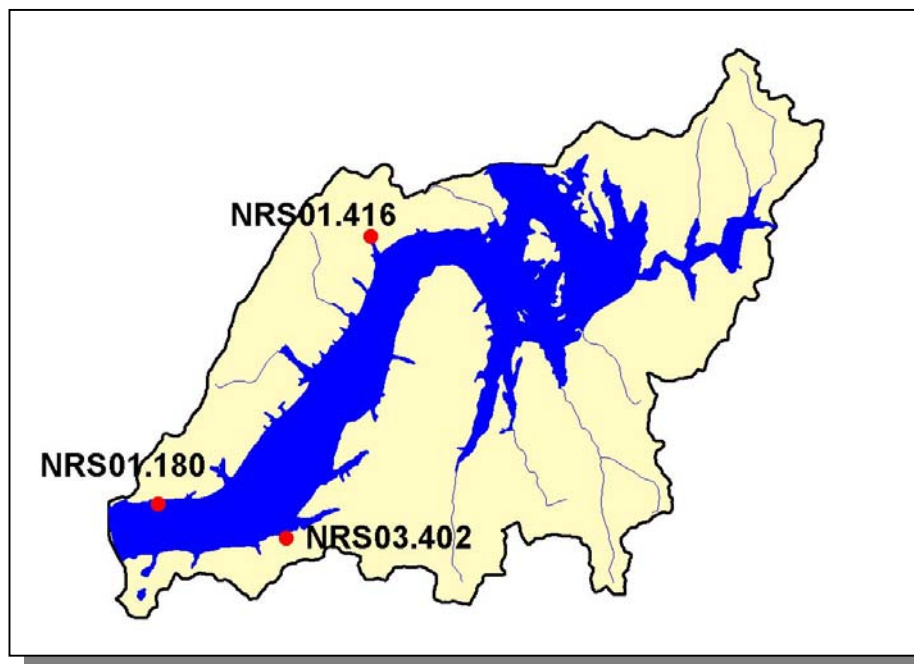
**Figure 4-10. Location of Active NPDES Sites in Subwatershed 060200010501.** More information, including the names of facilities, is provided in Appendix IV.



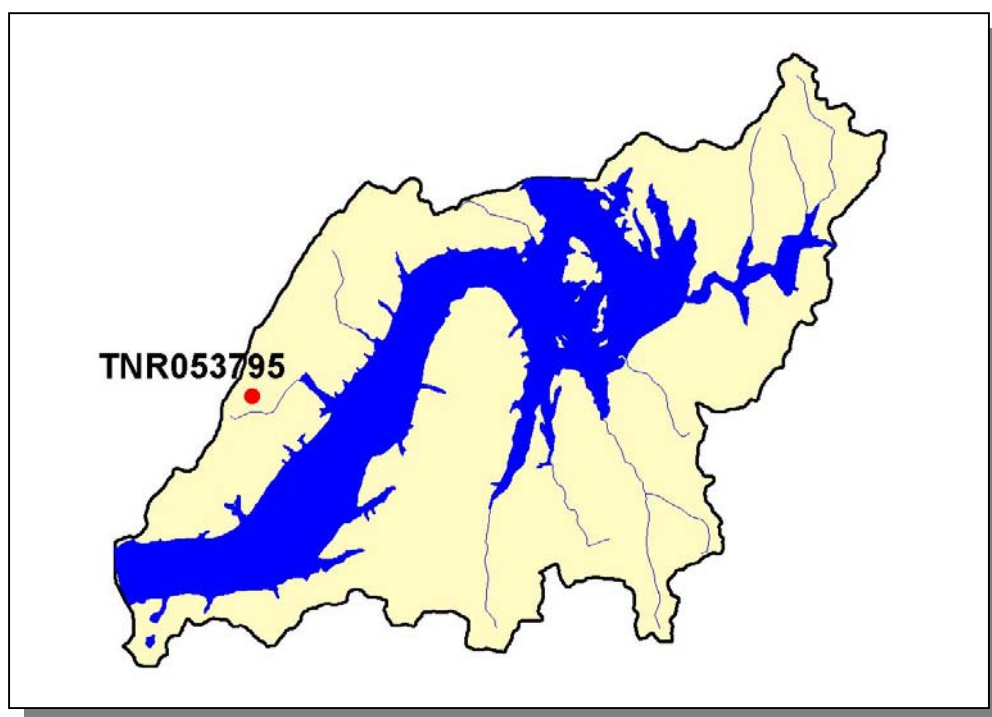
**Figure 4-11. Location of Permitted Herbicide Application Sites in Subwatershed 060200010501.** More information is provided in Appendix IV.



**Figure 4-12. Location of Water Treatment Plants in Subwatershed 060200010501.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-13. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 060200010501.** More information is provided in Appendix IV.

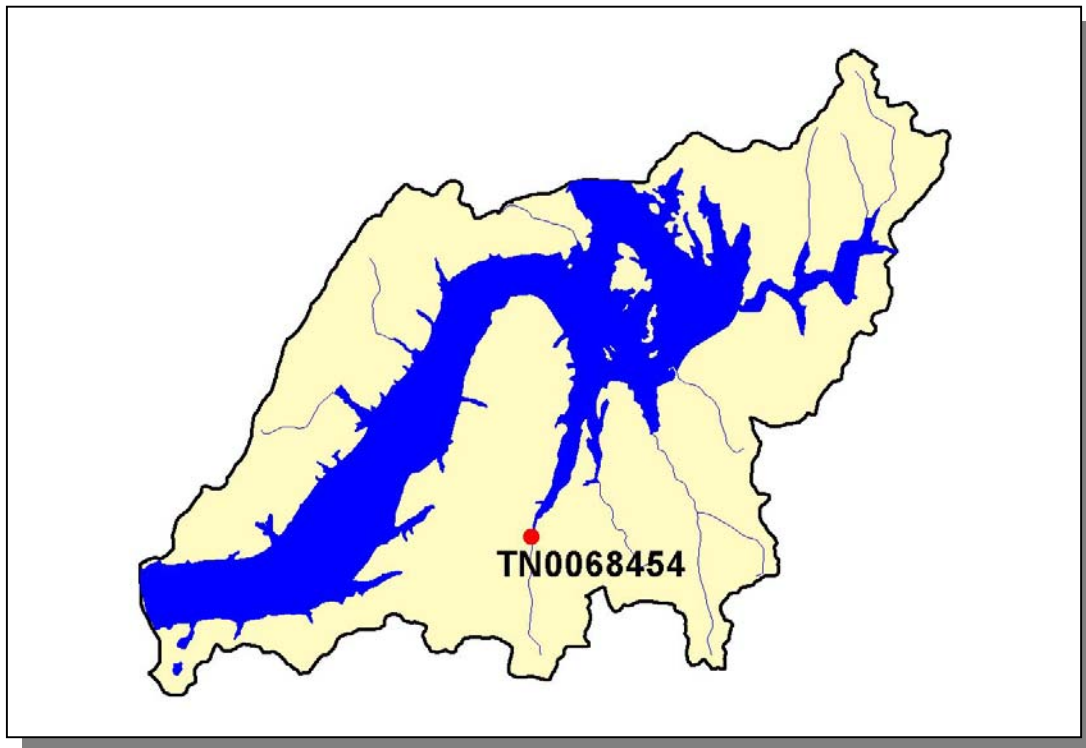


**Figure 4-14. Location of TMSP Sites in Subwatershed 060200010501.** More information, including the names of facilities, is provided in Appendix IV.

**4.2.A.i.a.i. Dischargers to Water Bodies Listed on the 2004 303(d) List**

There is one NPDES facility discharging to water bodies listed on the 2004 303(d) list in Subwatershed 060200010501:

- TN0068454 (Eastside Utility District WTP) discharges to Chickamauga Lake



**Figure 4-15. Location of NPDES Dischargers to Water Bodies Listed on the 2004 303(d) List in Subwatershed 051302060501.** More information, including the names of facilities, is provided in Appendix IV.

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PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0068454					

**Table 4-4. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010501.** Data are in million gallons per day (MGD). Data were obtained from the USGS publication Flow Duration and Low Flows of Tennessee Streams Through 1992 or from permit files.

PERMIT #	FLOW	AI
TN0068454	X	X

**Table 4-5. Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010501.**

PERMIT #	TRC	TSS	SETTLEABLE SOLIDS	pH
TN0068454	X	X	X	X

**Table 4-6. Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed.** TRC, Total Residual Chlorine; TSS, Total Suspended Solids.

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**4.2.A.i.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Broilers Sold)	Hogs	Sheep
114	242	13	15,351	17	<5

**Table 4-7. Summary of Livestock Count Estimates in Subwatershed 060200010501.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

LIVESTOCK COUNTS							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Hamilton	6,913	14,734	801	30	934,564	1,017	109

**Table 4-8. Summary of Livestock Count Estimates in Hamilton County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

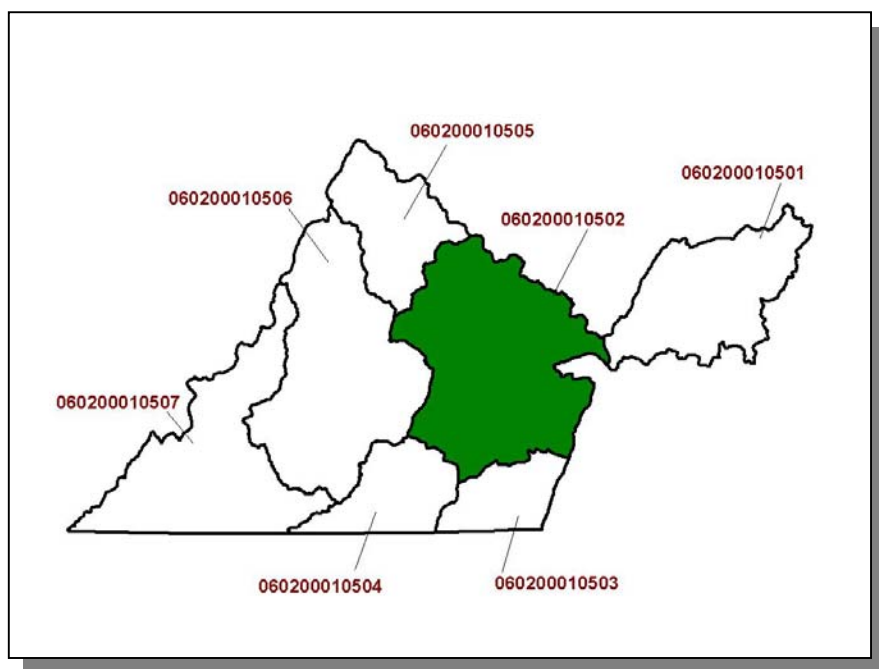
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Hamilton	210.7	210.7	2.2	6.0

**Table 4-9. Forest Acreage and Annual Removal Rates (1987-1994) in Hamilton County.**

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.34
Grass (Hayland)	2.33
Legumes, Grass (Hayland)	0.20
Legumes (Pastureland)	0.07
Grass, Forbs, Legumes (Mixed Pasture)	0.27
Corn (Row Crops)	5.28
Oats (Close-Grown Cropland)	3.13
Wheat (Close-Grown Cropland)	3.14
All Other Close-Grown Cropland	1.99
Farmsteads and Ranch Headquarters	0.10

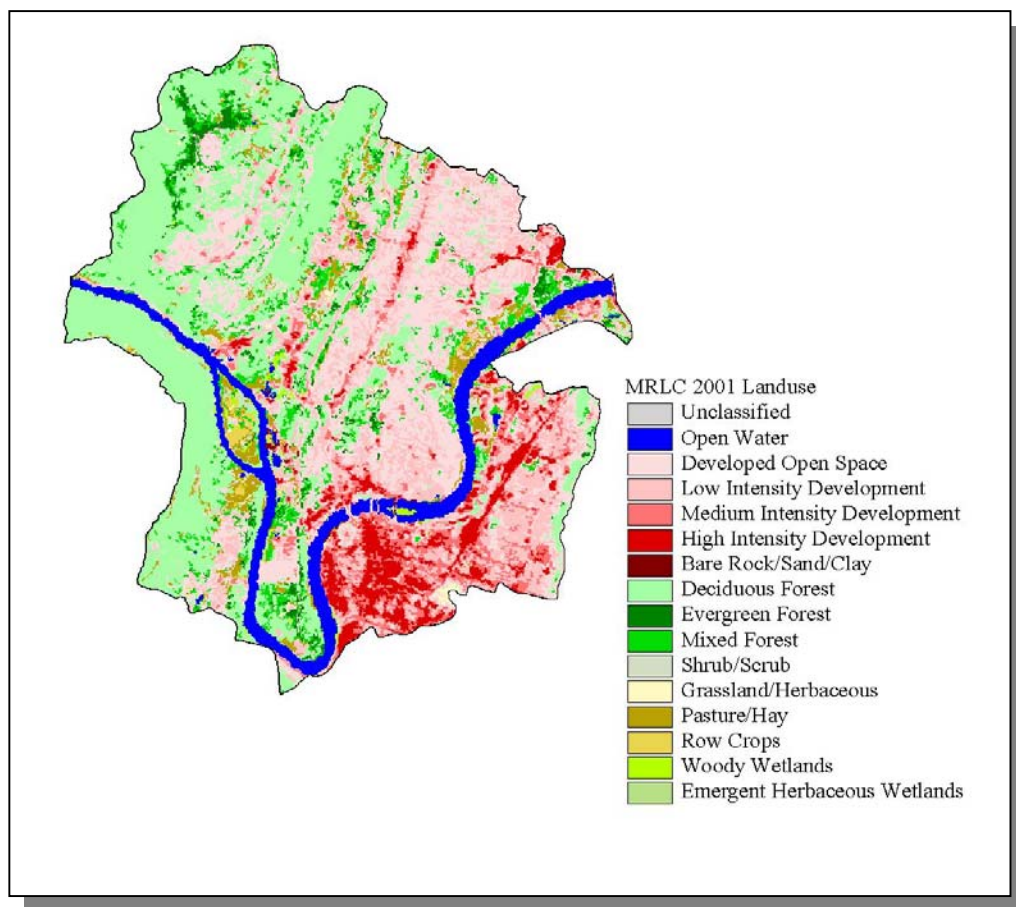
**Table 4-10. Annual Estimated Total Soil Loss in Subwatershed 060200010501.**

**4.2.A.ii. 060200010502 (Tennessee River).**



**Figure 4-16. Location of Subwatershed 060200010502.** All Group 4 Lower Tennessee River HUC-12 subwatershed boundaries in Tennessee are shown for reference.

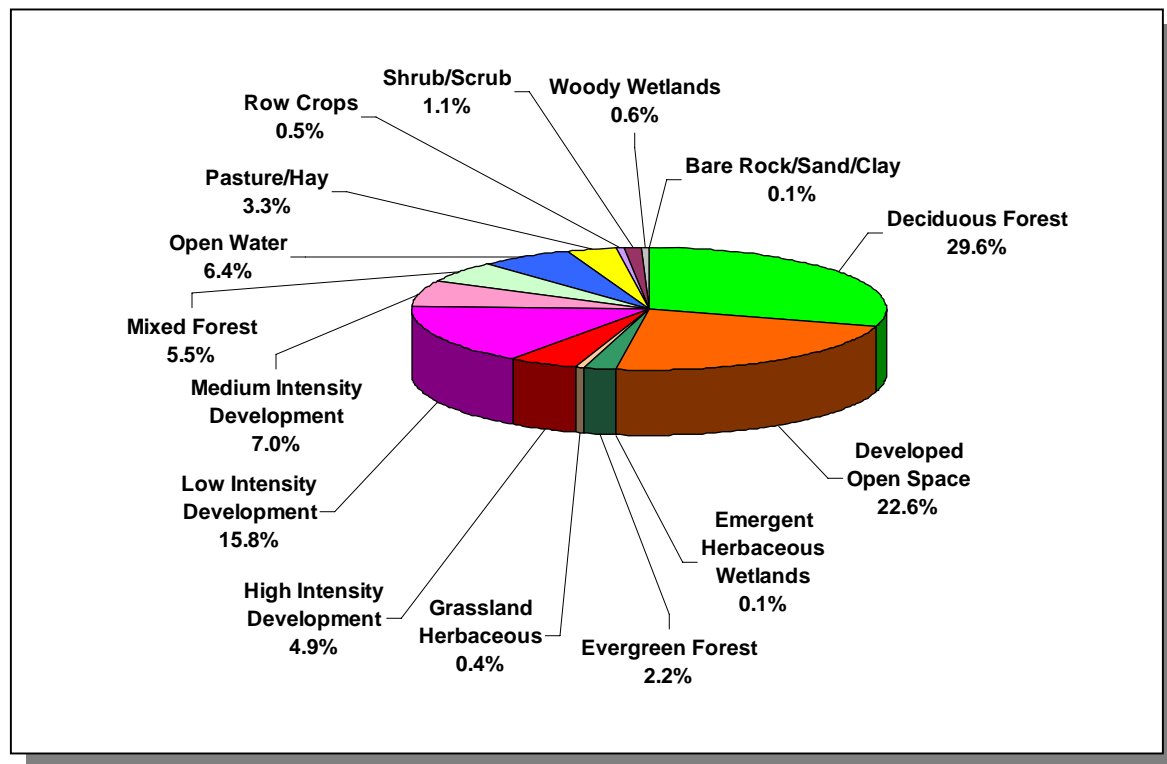
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**Figure 4-17. Illustration of Land Use Distribution in Subwatershed 060200010502.**

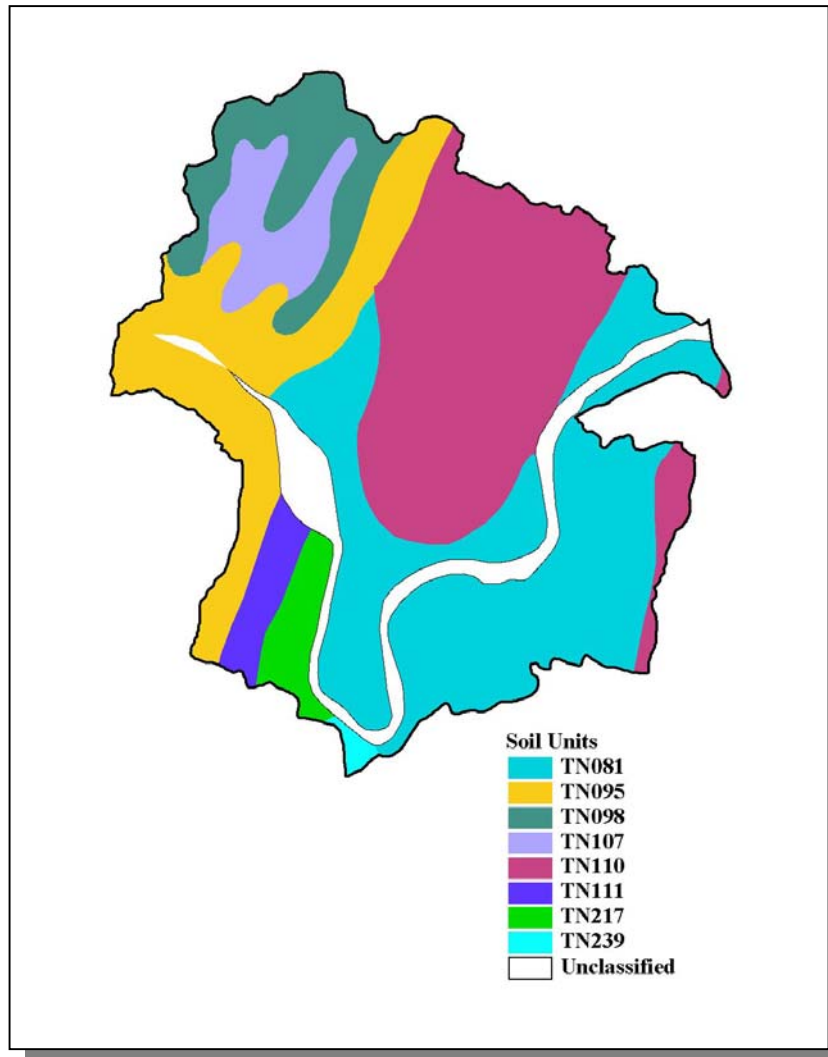


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**Figure 4-18. Land Use Distribution in Subwatershed 060200010502.** More information is provided in Appendix IV.

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**Figure 4-19. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060200010502.**

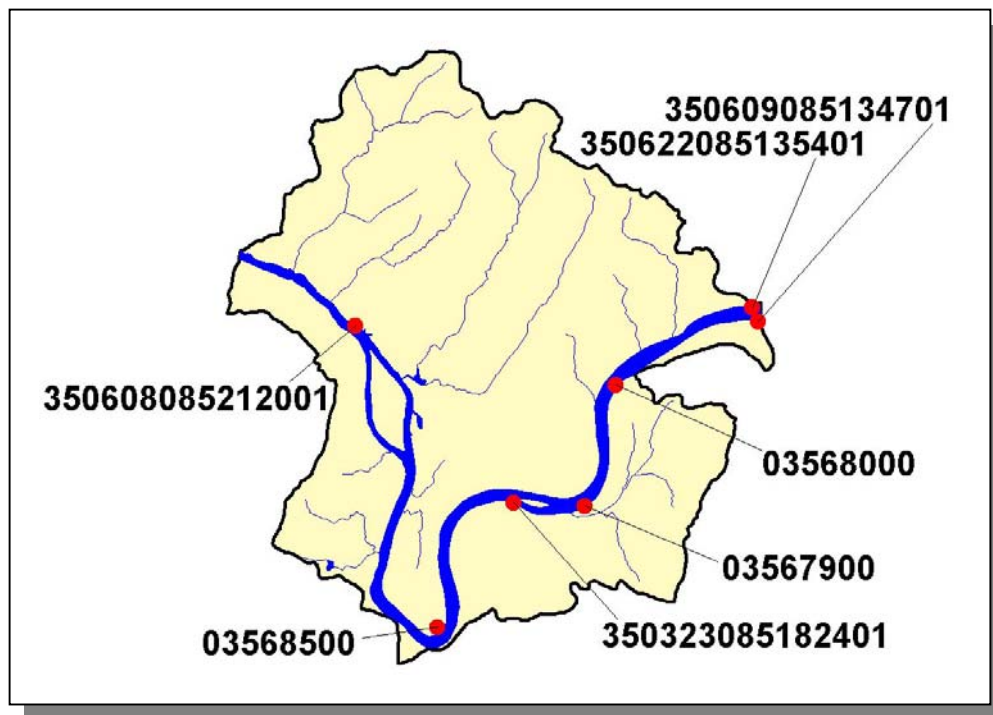
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN081	5.00	C	1.41	5.48	Silty Loam	0.35
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	3.98	4.82	Loam	0.32
TN107	1.00	C	6.34	4.84	Loam	0.28
TN110	0.00	B	2.22	4.96	Loam	0.31
TN111	0.00	C	1.41	5.10	Loam	0.34
TN217	0.00	C	2.34	5.32	Loam	0.35
TN239	2.00	C	2.94	4.86	Loam	0.22

**Table 4-11. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060200010502.** The definition of "Hydrologic Group" is provided in Appendix IV.

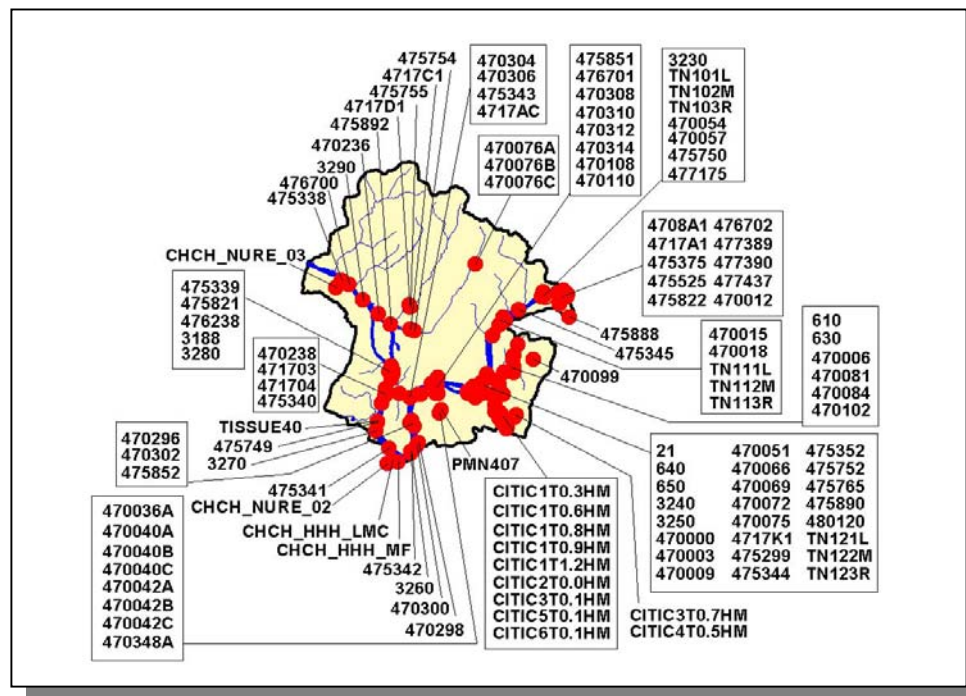
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Hamilton	285,536	294,865	307,896	10.38	29,639	30,607	31,960	7.8
Marion	24,860	26,674	27,776	0.2	29	53	55	12.2
<b>Total</b>	<b>310,396</b>	<b>321,539</b>	<b>335,672</b>		<b>29,688</b>	<b>30,660</b>	<b>32,015</b>	<b>7.8</b>

*Table 4-12. Population Estimates in Subwatershed 060200010502.*

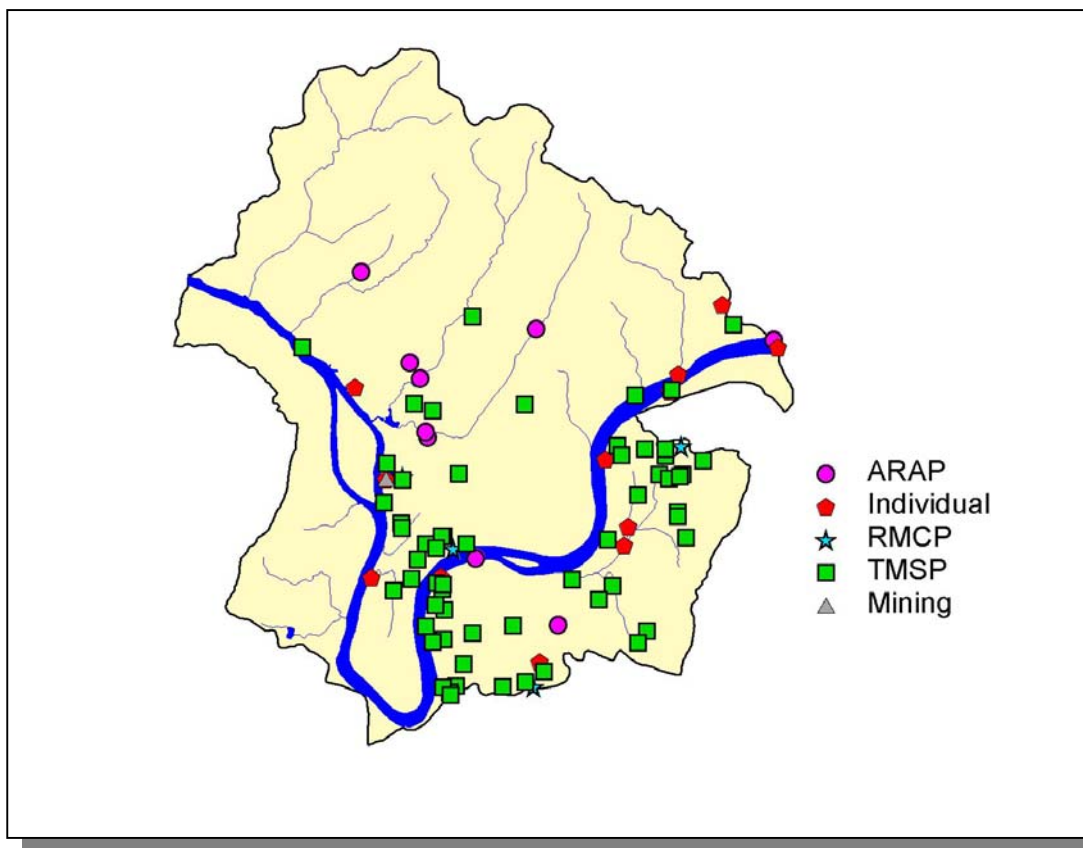


**Figure 4-20. Location of Historical Streamflow Data Collection Sites in Subwatershed 060200010502.** More information is provided in Appendix IV.

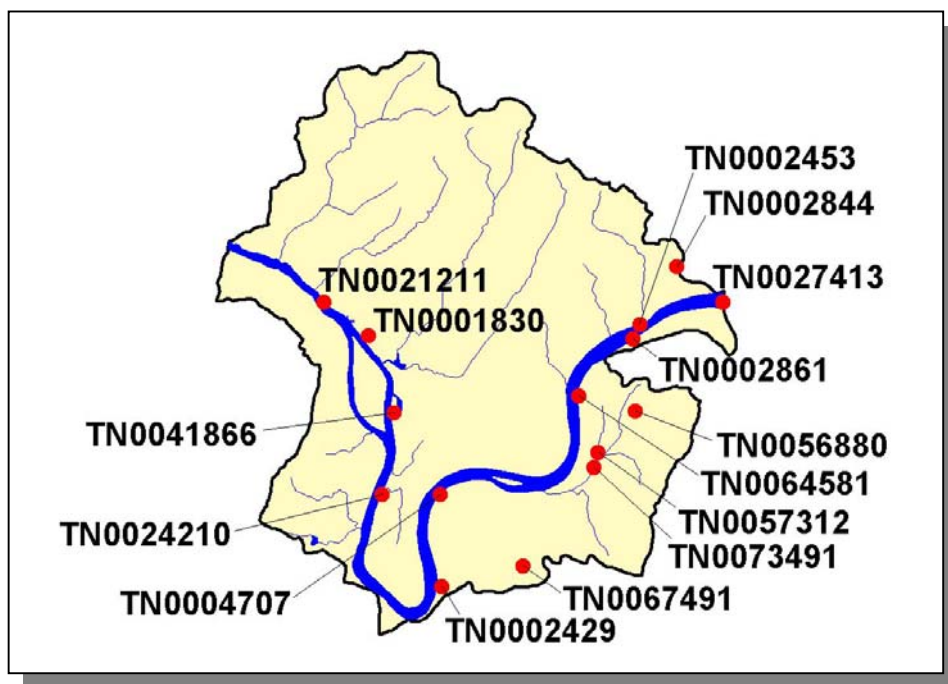


**Figure 4-21. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060200010502.** More information, including site names and locations, and station numbers for sites located in the watershed outside of Tennessee, is provided in Appendix IV.

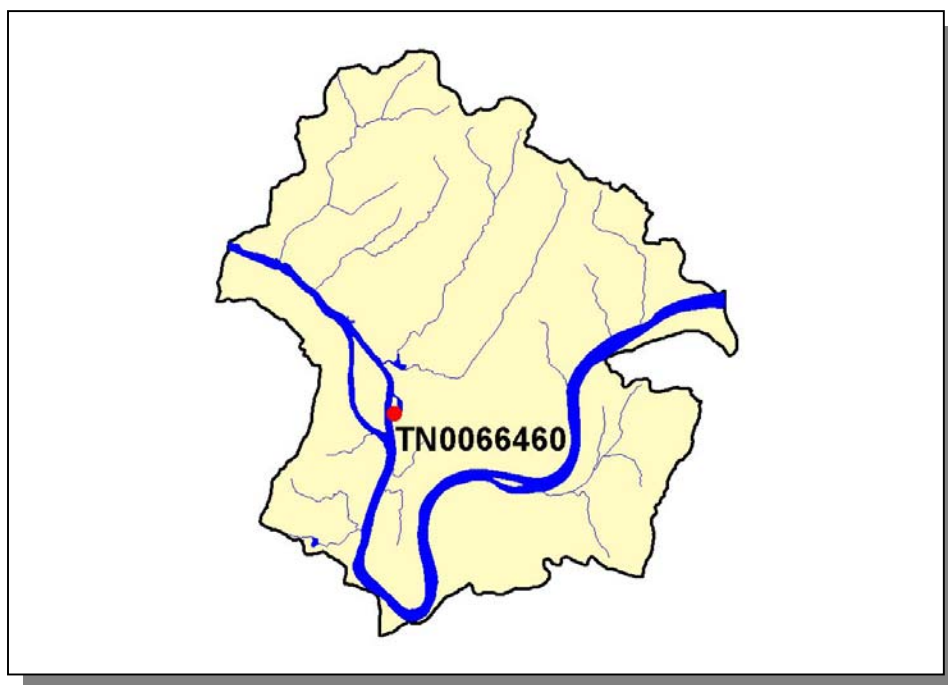
**4.2.A.ii.a. Point Source Contributions.**



**Figure 4-22. Location of Permits Issued in Subwatershed 060200010502.** More information, including the names of facilities, is provided in Appendix IV.

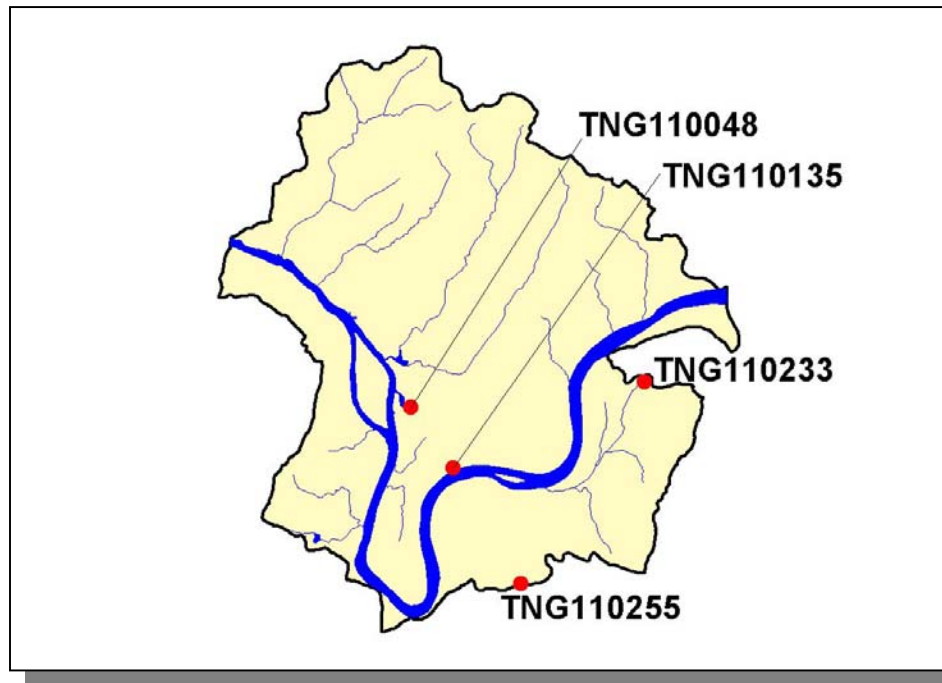


**Figure 4-23. Location of Active NPDES Sites in Subwatershed 060200010502.** More information, including the names of facilities, is provided in Appendix IV.

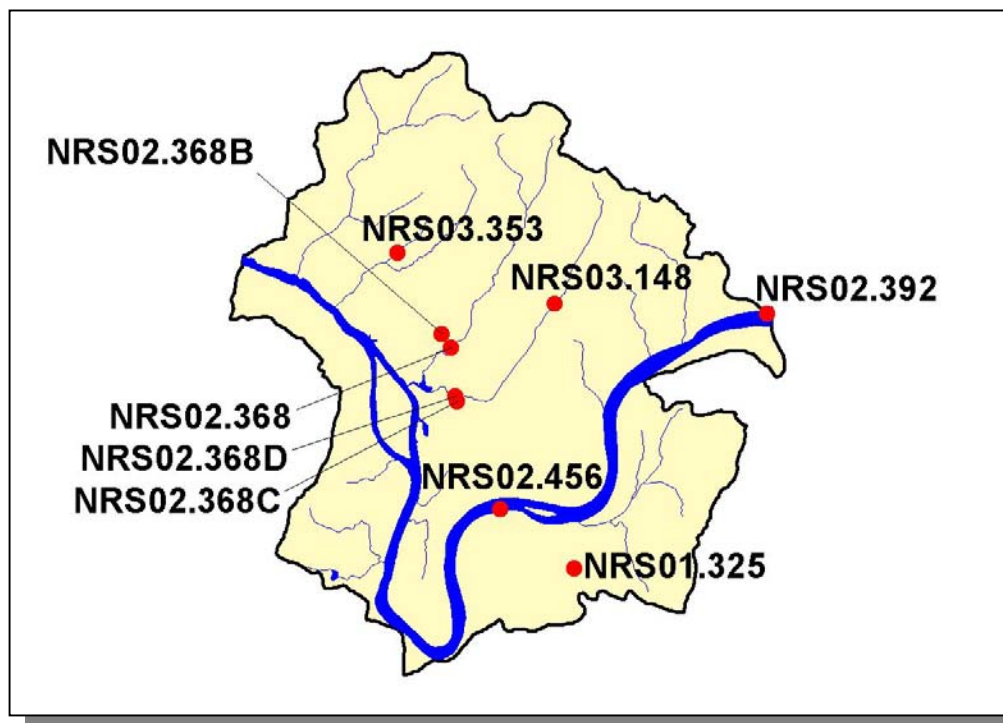


**Figure 4-24. Location of Active Mining Sites in Subwatershed 060200010502.** More information, including the names of mining operations, is provided in Appendix IV.

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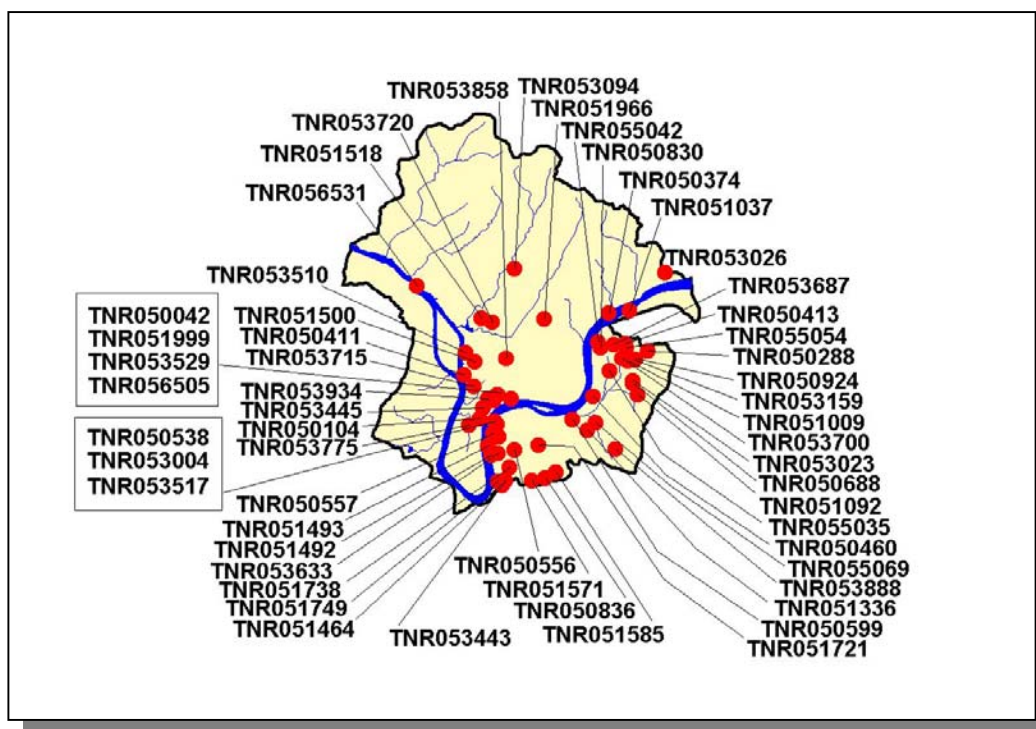
**Figure 4-25. Location of Ready Mix Concrete Plants (RMCP) in Subwatershed 060200010502.** More information is provided in Appendix IV.



**Figure 4-26. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 060200010502.** More information is provided in Appendix IV.



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**Figure 4-27. Location of TMSP Sites in Subwatershed 060200010502.** More information, including the names of facilities, is provided in Appendix IV.

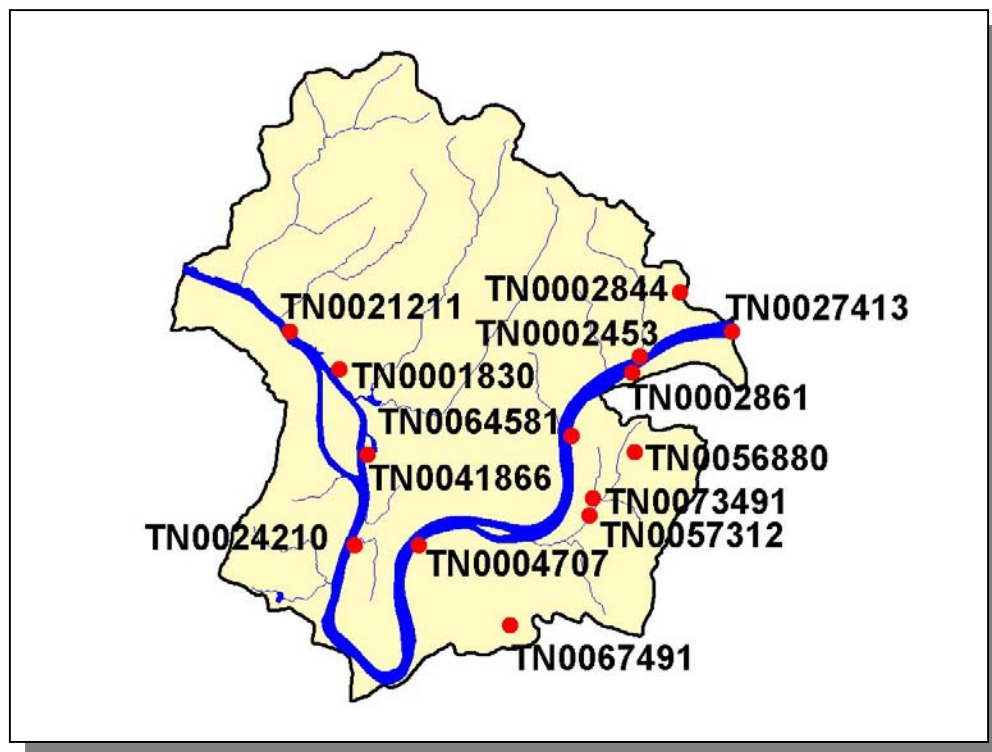


**4.2.A.ii.a.i.** Dischargers to Water Bodies Listed on the 2004 303(d) List

There are fourteen NPDES facilities discharging to water bodies listed on the 2004 303(d) list in Subwatershed 060200010502:

- TN0001830 (Signal Mountain Cement Company) discharges to the Tennessee River @ RM 454.5
- TN0002453 (R.L. Stowe Mills) discharges to the Tennessee River @ RM 469.3
- TN0002844 (Artiva Specialties) discharges to the Tennessee River @ RM 469.9, a wetland, a wet weather conveyance to the Tennessee River @ RM 469.7, and to an unnamed tributary to North Chickamauga Creek
- TN0002861 (BASF Corporation) discharges to the Tennessee River @ RM 469
- TN0021211 (Hamilton County Waste Water Treatment Plant) discharges to the Tennessee River @ RM 453.7
- TN0024210 (Chattanooga Moccasin Bend Waste Water Treatment Plant) discharges to the Tennessee River @ RM 457.8
- TN0027413 (TVA-Chickamauga Hydro Plant) discharges to the Tennessee River @ RM 471
- TN0041866 (Ergon Terminating, Inc.) discharges to the Tennessee River @ RM 456.4 and @ 456.0
- TN0004707 (Vulcan Construction Materials) discharges to the Tennessee River @ RM 463.2
- TN0056880 (Parman Lubricants) discharges to Citico Creek @ RM 1.9
- TN0057312 (Chattanooga Gas Company Liquified Natural Gas) discharges to a wet weather conveyance to Citico Creek @ RM 3.2
- TN0064581 (NA Industries, Inc.) discharges to the Tennessee River @ RM 467.2
- TN0067491 (Top Flight, Incorporated) discharges to Dobbs Branch @ RM 0.3
- TN0073491 (Norfolk Southern Railway) discharges to Citico Creek and to an unnamed tributary to Citico Creek

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**Figure 4-28. Location of NPDES Dischargers to Water Bodies Listed on the 2004 303(d) List in Subwatershed 051302060502.** More information, including the names of facilities, is provided in Appendix IV.

PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0001830					
TN0002453					
TN0002844					
TN0002861					
TN0004707					
TN0021211	3,018				
TN0024210					
TN0027413					
TN0041866					
TN0056880					
TN0057312					
TN0064581					
TN0067491					
TN0073491					

**Table 4-13. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010502.** Data are in million gallons per day (MGD). Data were obtained from the USGS publication *Flow Duration and Low Flows of Tennessee Streams Through 1992* or from permit files.

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PERMIT #	P	FLOW	TEMPERATURE	NO <sub>3</sub> +NO <sub>2</sub>	N
TN0001830		X			
TN0002453		X	X		
TN0002844		X	X		
TN0002861		X	X		
TN0004707		X			
TN0024210	X	X		X	X
TN0027413		X			
TN0041866		X			
TN0064581		X	X		
TN0067491		X			
TN0073491		X			

**Table 4-14. Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010502.**

PERMIT #	Zn	Cu	Pb	Cd	Hg	As	Se	V
TN0002453	X	X						
TN0002844	X	X	X	X	X	X	X	X

**Table 4-15. Inorganic Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010502.**

PERMIT #	TRICHLOROETHYLENE	TETRACHLOROETHYLENE	STYRENE
TN0002844	X	X	
TN0041866			X

**Table 4-16. Organic Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010502.**

PERMIT #	COMBINED RELEASES	RAINFALL EVENTS
TN0024210	X	X

**Table 4-17. Additional Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010502.**

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PERMIT #	WET	COD	CBOD <sub>5</sub>	NH <sub>3</sub>	N	TRC	TSS	SETTLEABLE SOLIDS	DO	pH
TN0001830							X			X
TN0002453			X	X			X			X
TN0002844		X	X		X		X			
TN0002861		X								X
TN0021211			X			X	X	X	X	X
TN0024210	X		X	X		X	X	X	X	X
TN0027413							X			
TN0041866							X	X		X
TN0056880							X			X
TN0057312	X						X			X
TN0064581										X
TN0067491										X
TN0073491		X					X			X

**Table 4-18. Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010502.** wet, Whole Effluent Toxicity; COD, Chemical Oxygen Demand; CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-Day); TRC, Total Residual Chlorine; TSS, Total Suspended Solids.

PERMIT #	E. coli	FECAL COLIFORM
TN0021211	X	X
TN0024210	X	X

**Table 4-19. Bacteria Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010502.**

PERMIT #	OIL and GREASE	PCB	BENZENE	ETHYLBENZENE	TOLUENE	XYLENE
TN0002453	X					
TN0002844	X					
TN0024210	X					
TN0027413		X				
TN0041866	X		X	X	X	X
TN0057312	X					
TN0067491	X					
TN0073491	X					

**Table 4-20. Organic Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010502.** PCB, Polychlorinated Biphenyls.

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**4.2.A.ii.b. Nonpoint Source Contributions.**

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
258	549	30	<5	34,818	38	<5

**Table 4-21. Summary of Livestock Count Estimates in Subwatershed 060200010502.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

<b>LIVESTOCK COUNTS</b>							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Hamilton	6,913	14,734	801	30	934,564	1,017	109
Marion	4,424	8,939	311	246	3,782,097	279	0

**Table 4-22. Summary of Livestock Count Estimates in Hamilton and Marion Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

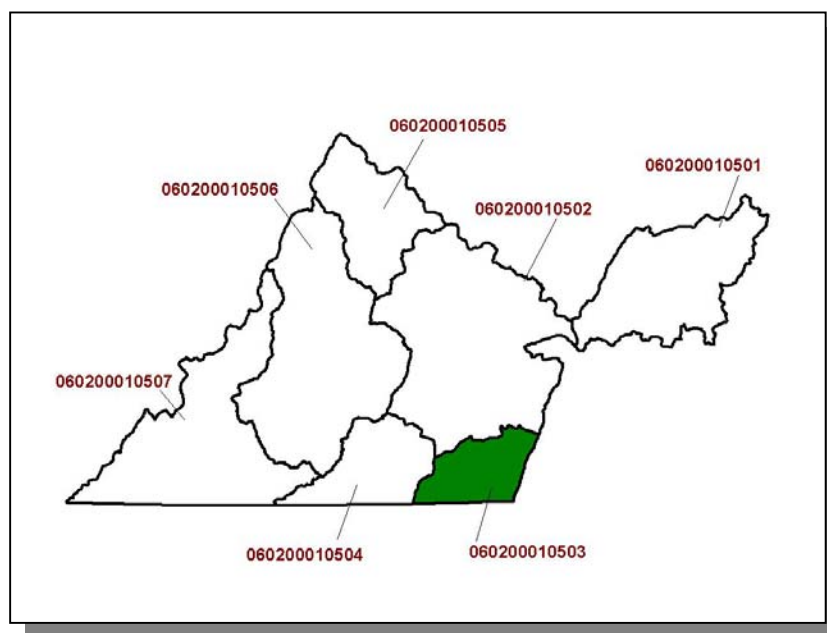
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Hamilton	210.7	210.7	2.2	6.0
Marion				

**Table 4-23. Forest Acreage and Annual Removal Rates (1987-1994) in Hamilton and Marion Counties.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Grass (Pastureland)	0.34
Grass (Hayland)	2.33
Legumes, Grass (Hayland)	0.20
Legumes (Pastureland)	0.07
Grass, Forbs, Legumes (Mixed Pasture)	0.27
Corn (Row Crops)	5.25
Soybeans (Row Crops)	4.56
Oats (Close-Grown Cropland)	3.13
Wheat (Close-Grown Cropland)	3.14
All Other Close-Grown Cropland	1.99
Other (Horticultural)	0.29
Other Vegetable and Truck Crops	7.28
Farmsteads and Ranch Headquarters	0.10

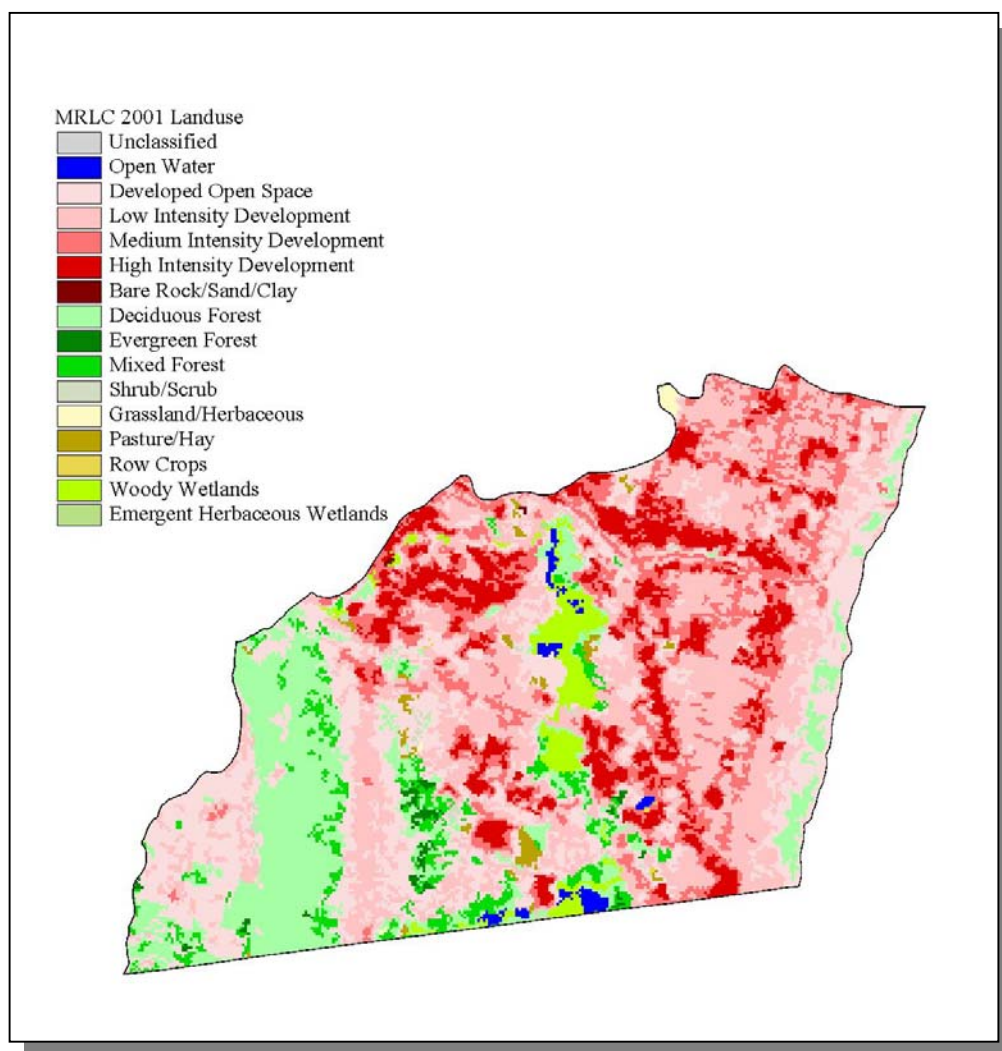
**Table 4-24. Annual Estimated Total Soil Loss in Subwatershed 060200010502.**

**4.2.A.iii. 060200010503 (Chattanooga Creek).**



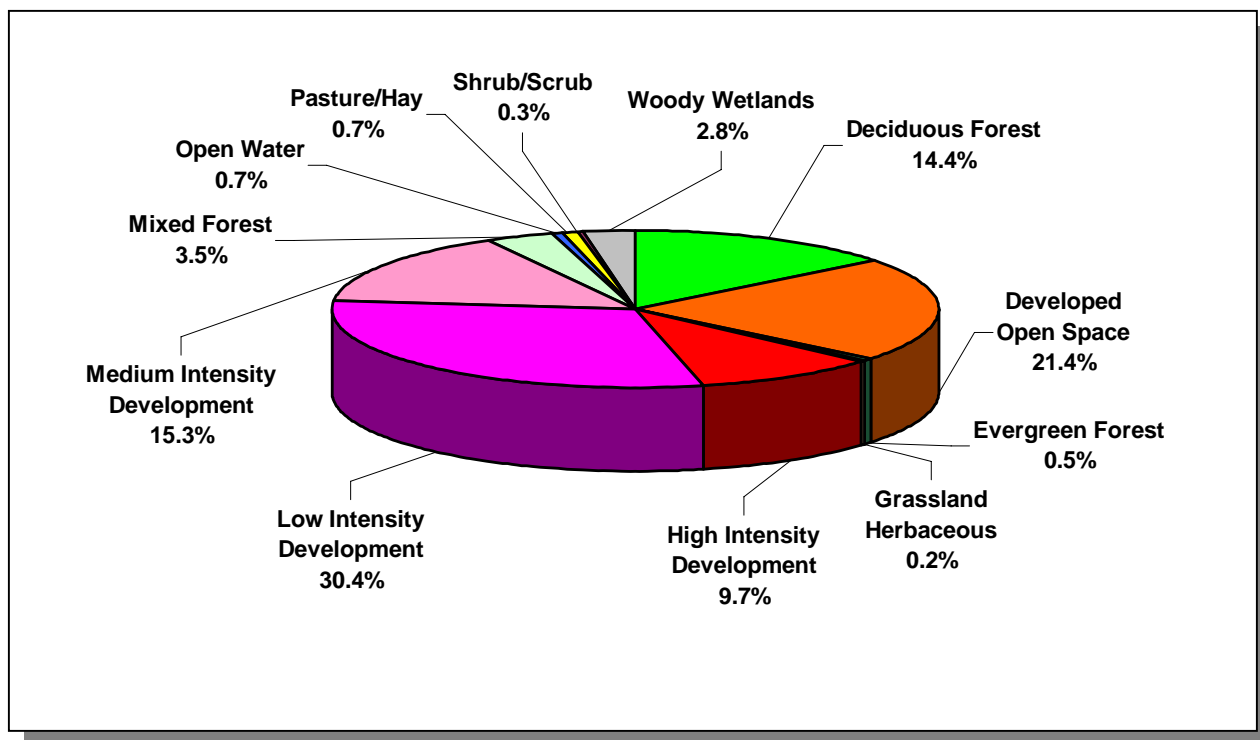
**Figure 4-29. Location of Subwatershed 060200010503.** All Group 4 Lower Tennessee River HUC-12 subwatershed boundaries in Tennessee are shown for reference.

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**Figure 4-30. Illustration of Land Use Distribution in Subwatershed 060200010503.**

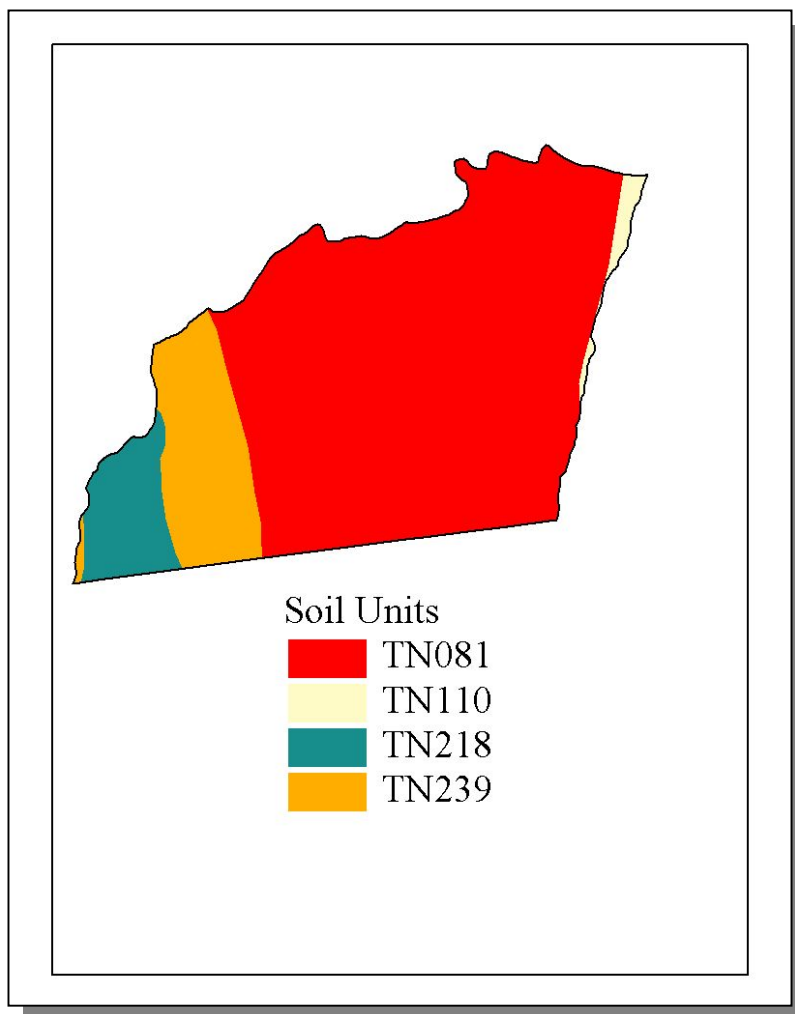
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**Figure 4-31. Land Use Distribution in Subwatershed 060200010503.** More information is provided in Appendix IV.



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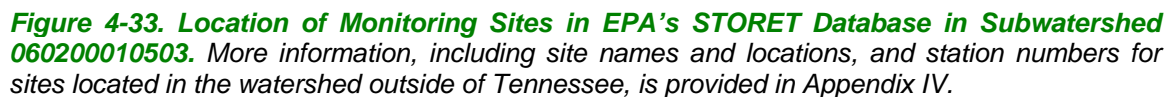


**Figure 4-32. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060200010503.**

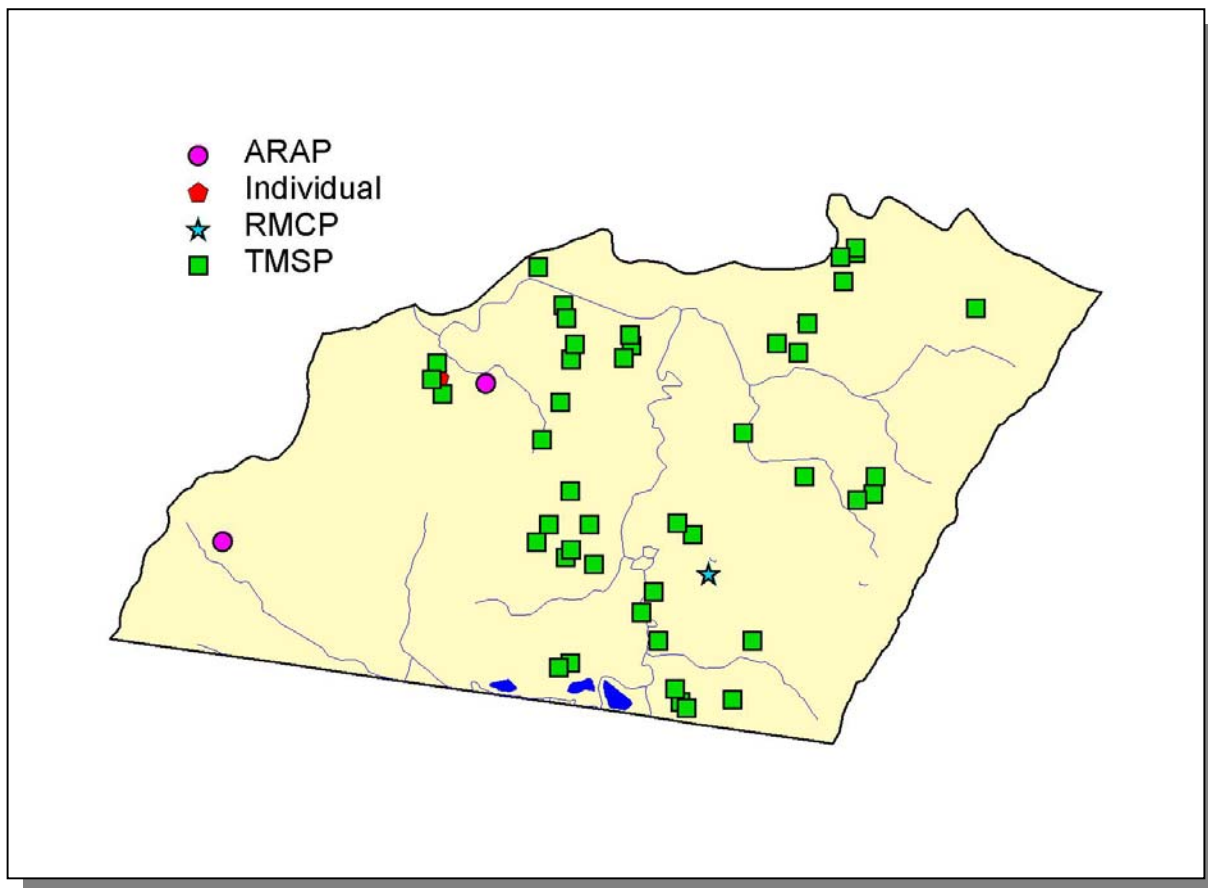
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN081	5.00	C	1.41	5.48	Silty Loam	0.35
TN110	0.00	B	2.22	4.96	Loam	0.31
TN218	0.00	C	3.41	4.95	Sandy Loam	0.23
TN239	2.00	C	2.94	4.86	Loam	0.22

**Table 4-25. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060200010503.** The definition of "Hydrologic Group" is provided in Appendix IV.

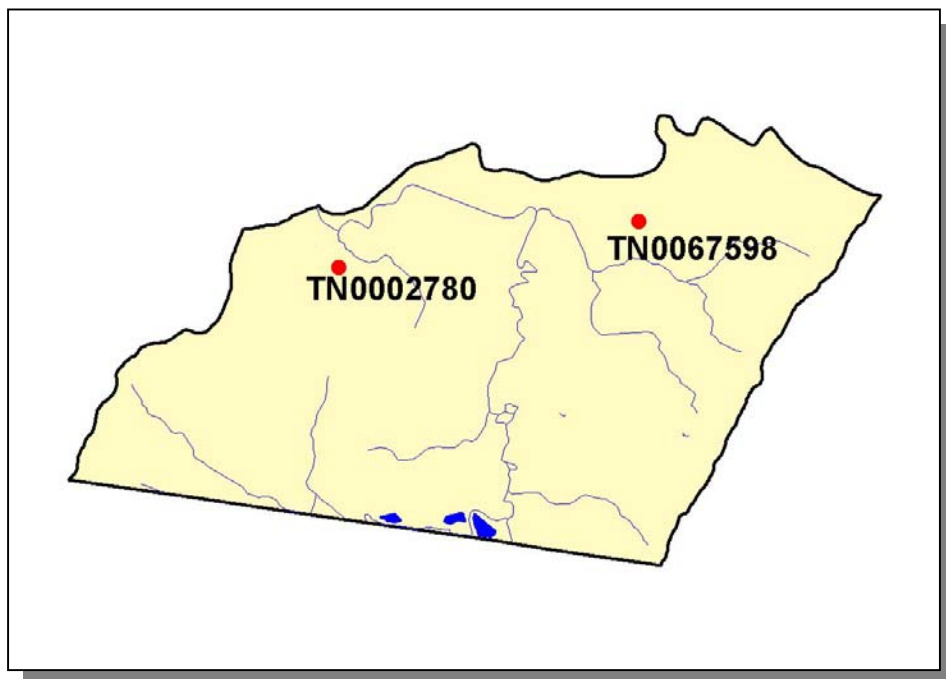
**Table 4-26. Population Estimates in Subwatershed 060200010503.**



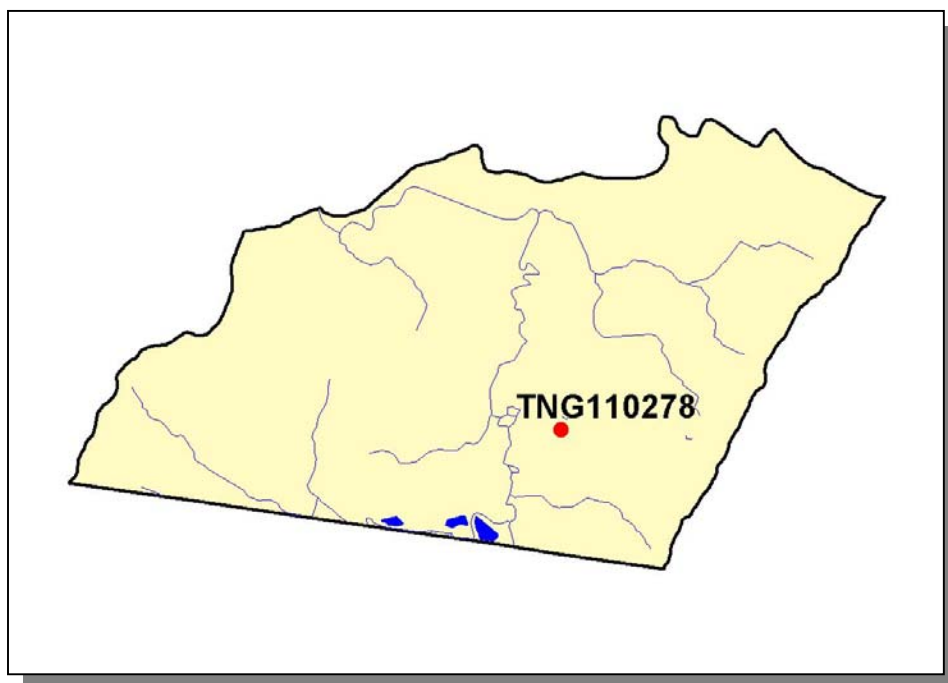
**4.2.A.iii.a. Point Source Contributions.**



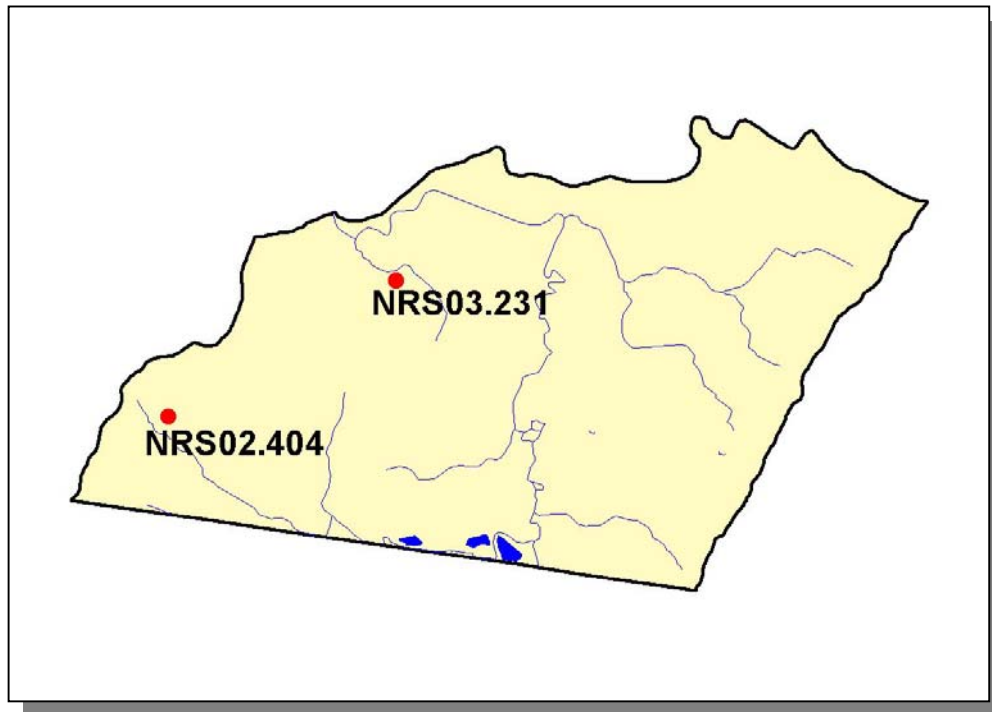
**Figure 4-34. Location of Permits Issued in Subwatershed 060200010503.** More information, including the names of facilities, is provided in Appendix IV.



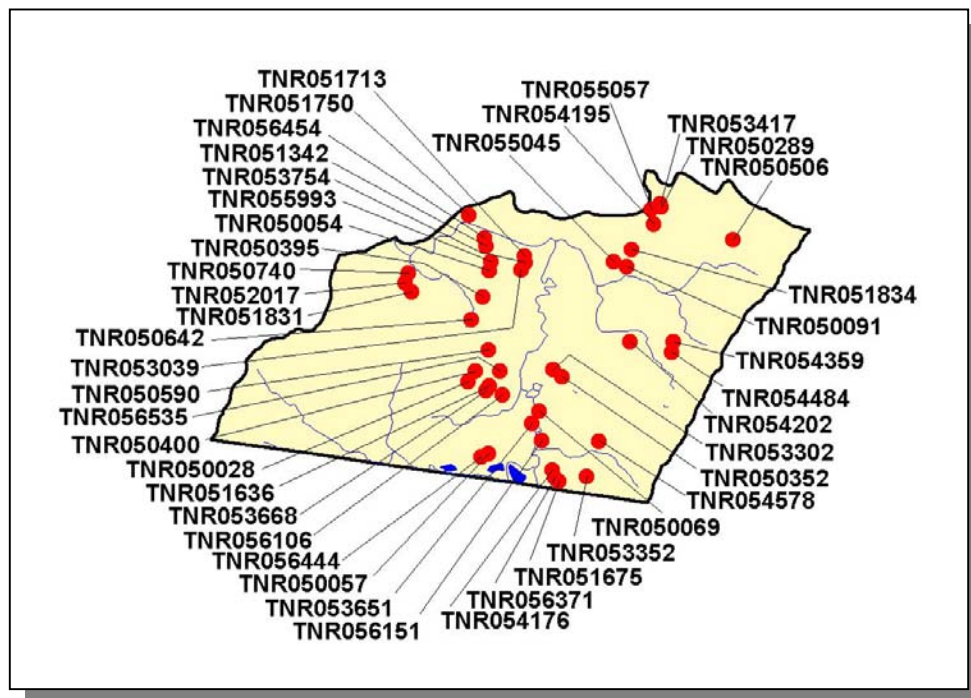
**Figure 4-35. Location of Active NPDES Sites in Subwatershed 060200010503.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-36. Location of Ready Mix Concrete Plants (RMCP) in Subwatershed 060200010503.** More information is provided in Appendix IV.



**Figure 4-37. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 060200010503.** More information is provided in Appendix IV.

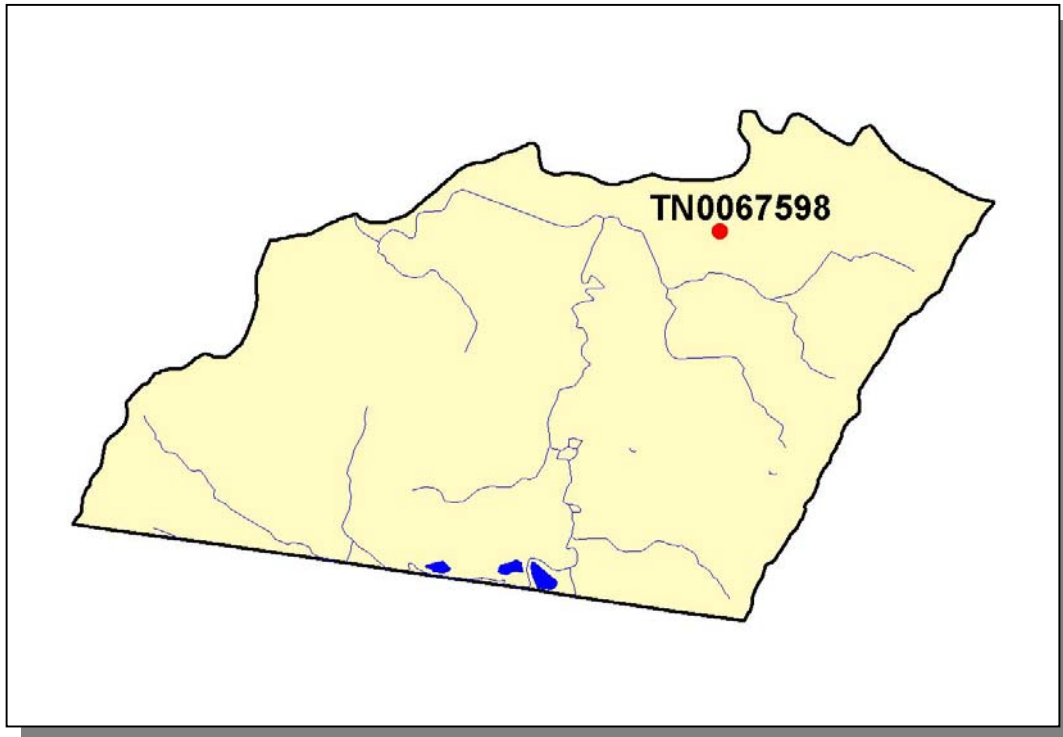


**Figure 4-38. Location of TMRP Sites in Subwatershed 060200010503.** More information, including the names of facilities, is provided in Appendix IV.

**4.2.A.iii.a.i. Dischargers to Water Bodies Listed on the 2004 303(d) List**

There is one NPDES facility discharging to water bodies listed on the 2004 303(d) list in Subwatershed 060200010503:

- TN0067598 (Hunter Oil Company) discharges to an unnamed tributary @ RM 0.4 to Dobbs Creek



**Figure 4-39. Location of NPDES Dischargers to Water Bodies Listed on the 2004 303(d) List in Subwatershed 051302060503.** More information, including the names of facilities, is provided in Appendix IV.

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PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0067598					

**Table 4-27. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010503.** Data are in million gallons per day (MGD). Data were obtained from the USGS publication Flow Duration and Low Flows of Tennessee Streams Through 1992 or from permit files.

PERMIT #	FLOW
TN0067598	X

**Table 4-28. Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010503.**

PERMIT #	OIL SHEEN
TN0067598	X

**Table 4-29. Organic Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010503.**

PERMIT #	FOAM	COLOR	FLOATING MATTER
TN0067598	X	X	X

**Table 4-30. Additional Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010503.**

PERMIT #	CBOD <sub>5</sub>	TSS	pH
TN0067598	X	X	X

**Table 4-31. Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010503.** CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-Day); TSS, Total Suspended Solids.

PERMIT #	OIL and GREASE
TN0067598	X

**Table 4-32. Organic Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 060200010503.**

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**4.2.A.iii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS				
Beef Cow	Cattle	Milk Cow	Chickens (Broilers Sold)	Hogs
11	24	<5	6,593	<5

**Table 4-33. Summary of Livestock Count Estimates in Subwatershed 060200010503.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Hamilton	6,913	14,734	801	30	934,564	1,017	109

**Table 4-34. Summary of Livestock Count Estimates in Hamilton County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Hamilton	210.7	210.7	2.2	6.0

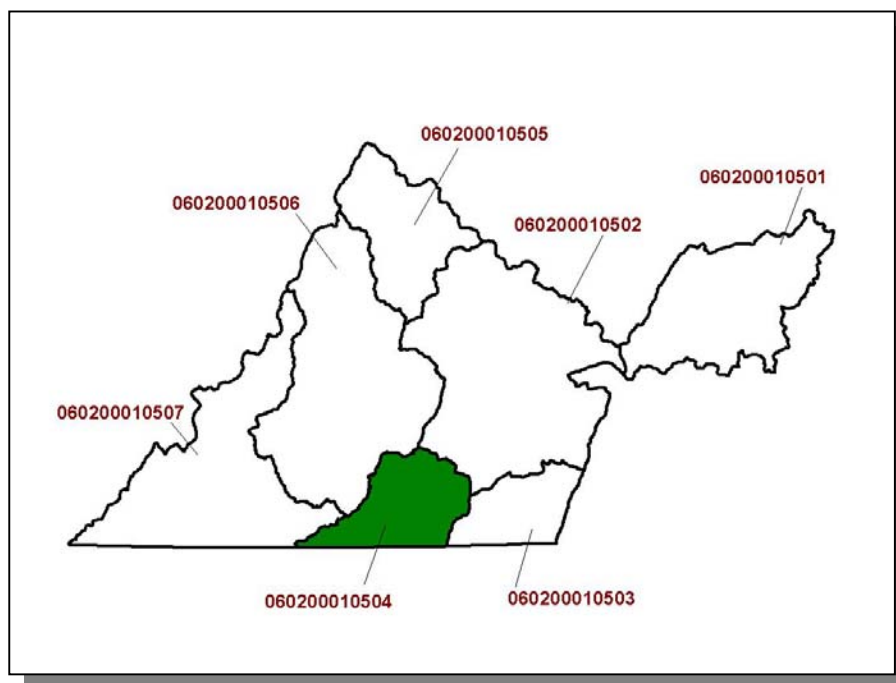
**Table 4-35. Forest Acreage and Annual Removal Rates (1987-1994) in Hamilton County.**

CROPS	TONS/ACRE/YEAR
Legumes (Pastureland)	0.07
Grass (Pastureland)	0.32
Grass (Hayland)	2.05
Legumes, Grass (Hayland)	0.20
Grass, Forbs, Legumes (Mixed Pasture)	0.27
Corn (Row Crops)	5.28
Potatoes (Row Crops)	5.26
Soybeans (Row Crops)	8.85
Oats (Close-Grown Cropland)	3.13
Wheat (Close-Grown Cropland)	3.14
All Other Close-Grown Cropland	1.99
Other Cropland not Planted	1.26
Farmsteads and Ranch Headquarters	0.31

**Table 4-36. Annual Estimated Total Soil Loss in Subwatershed 060200010503.**

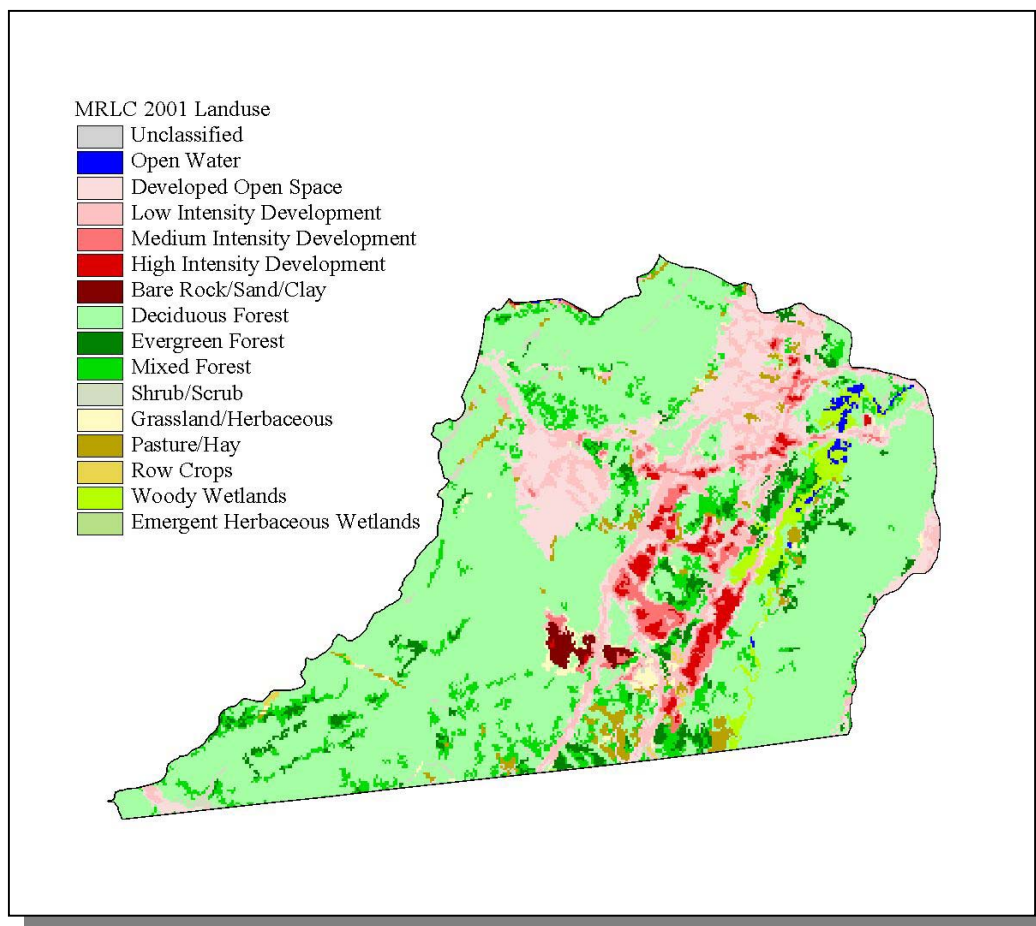


**4.2.A.iv. 060200010504 (Lookout Creek).**



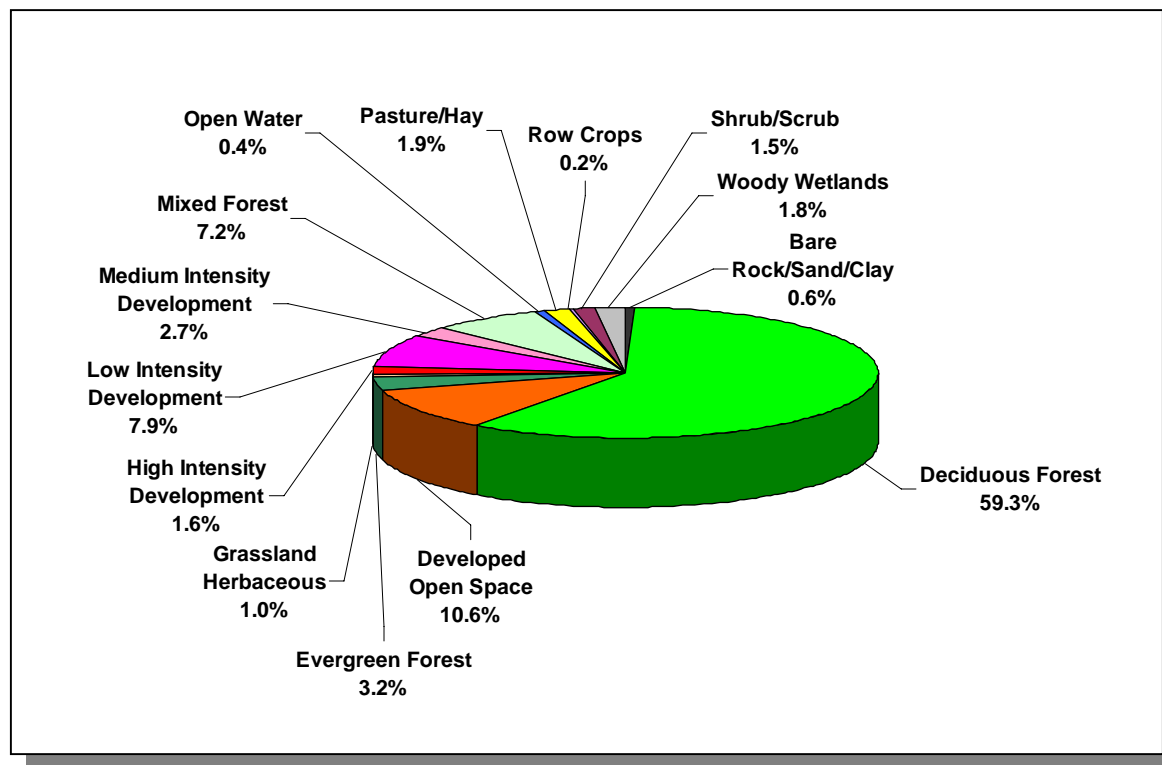
**Figure 4-40. Location of Subwatershed 060200010504.** All Group 4 Lower Tennessee River HUC-12 subwatershed boundaries in Tennessee are shown for reference.

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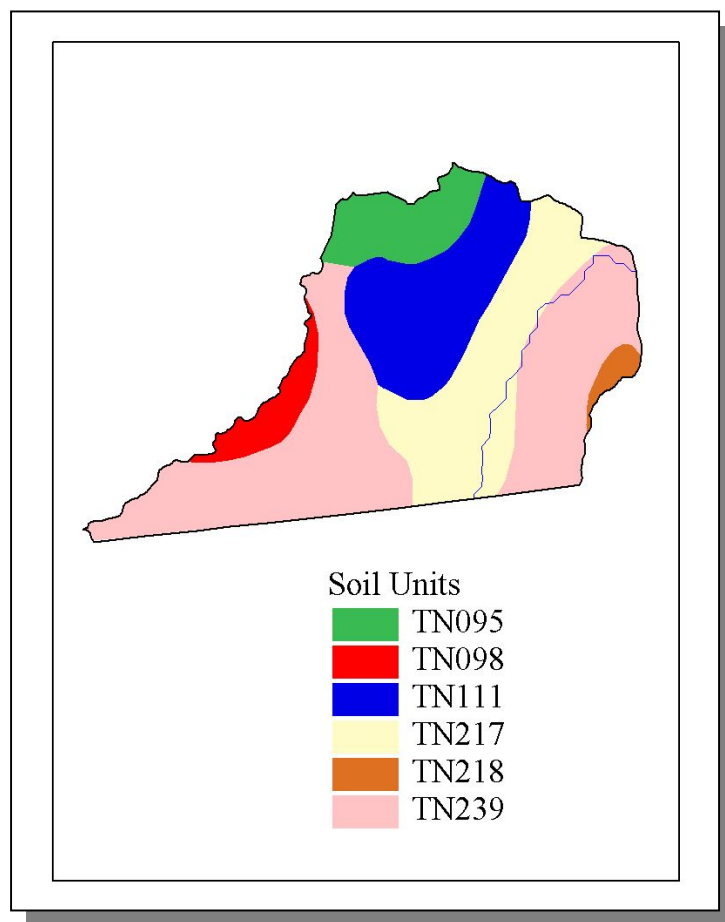
*Figure 4-41. Illustration of Land Use Distribution in Subwatershed 060200010504.*

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**Figure 4-42. Land Use Distribution in Subwatershed 060200010504.** More information is provided in Appendix IV.

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**Figure 4-43. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060200010504.**

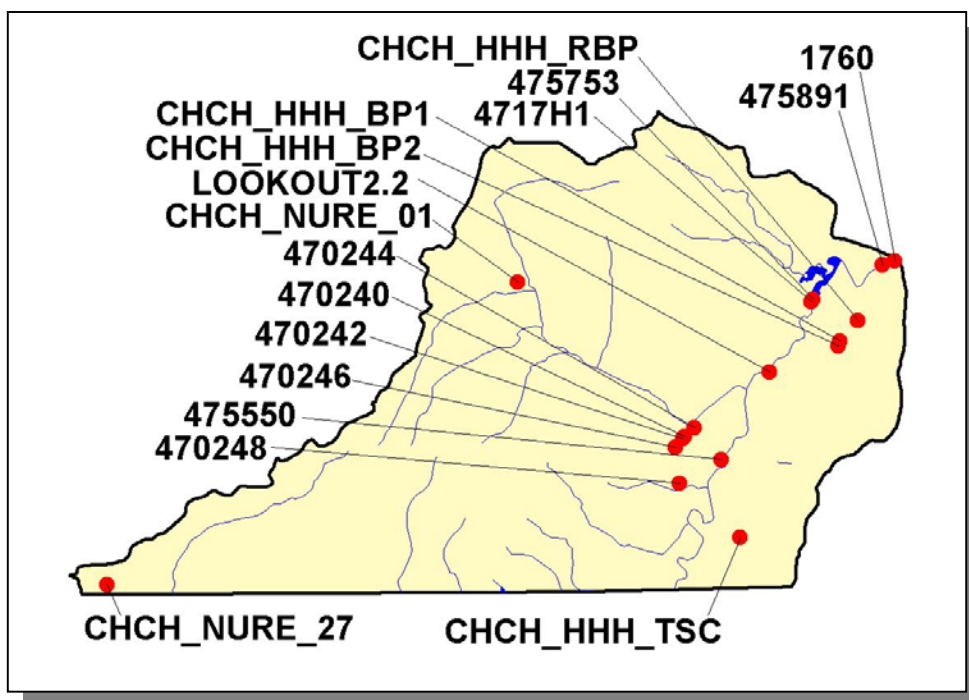
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	3.98	4.82	Loam	0.32
TN111	0.00	C	1.41	5.10	Loam	0.34
TN217	0.00	C	2.34	5.32	Loam	0.35
TN218	0.00	C	3.41	4.95	Sandy Loam	0.23
TN239	2.00	C	2.94	4.86	Loam	0.22

**Table 4-37. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060200010504.** The definition of "Hydrologic Group" is provided in Appendix IV.

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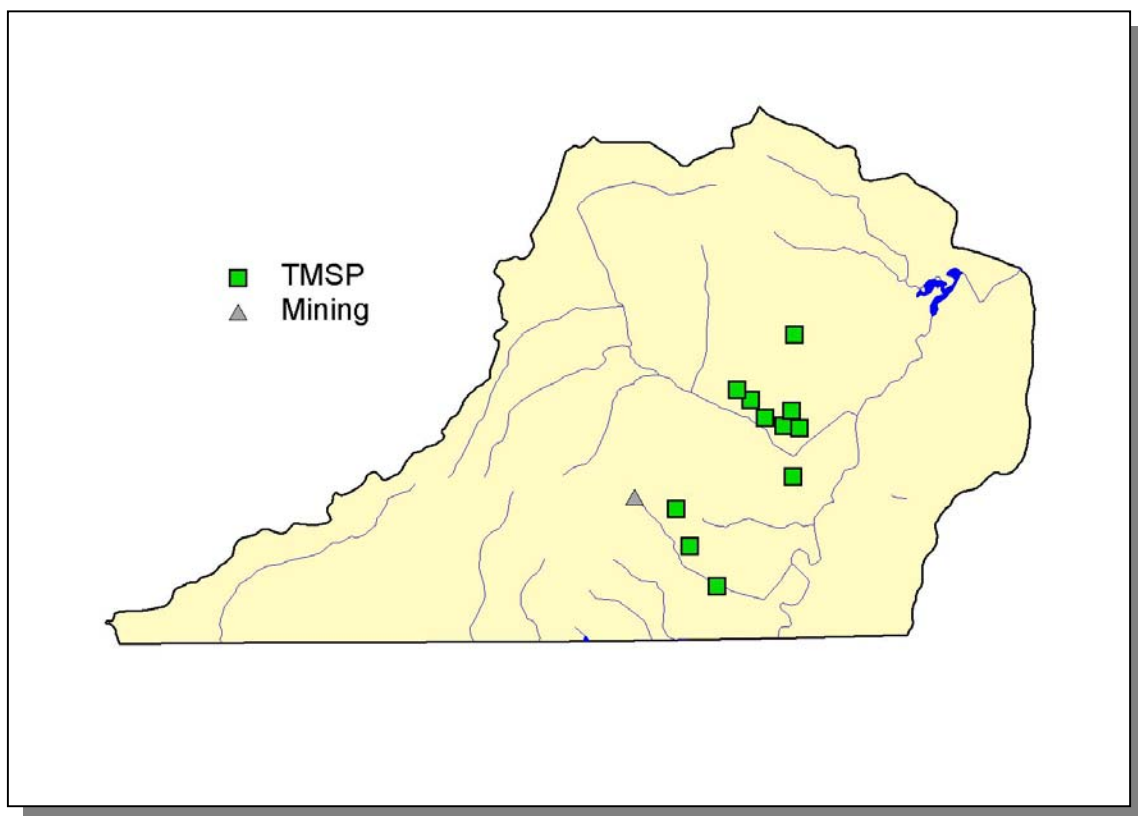
County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Hamilton	285,536	294,865	307,896	2.61	7,444	7,688	8,027	7.8

**Table 4-38. Population Estimates in Subwatershed 060200010504.**

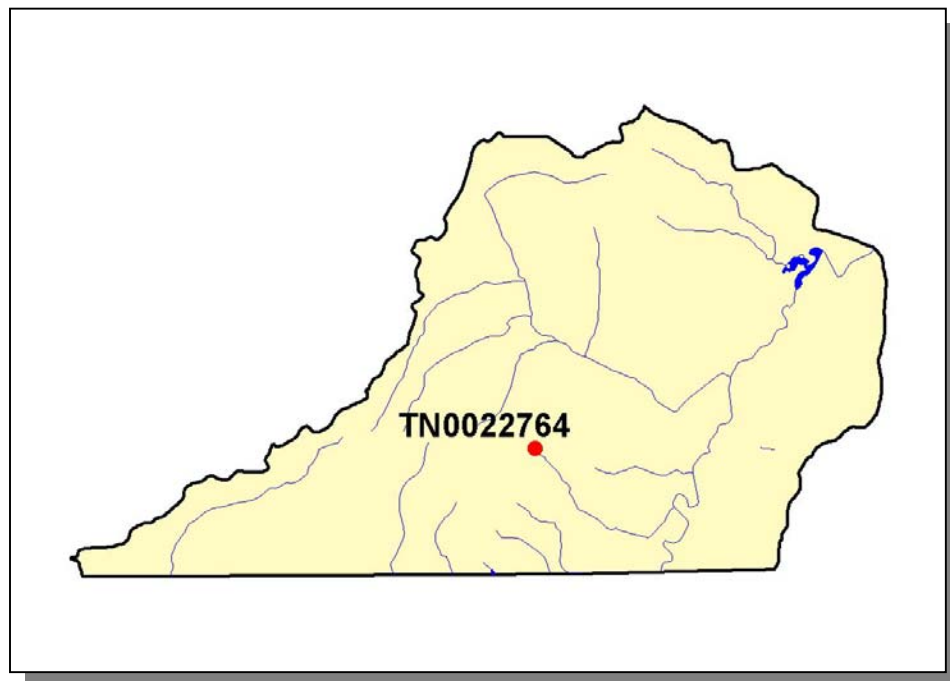


**Figure 4-44. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060200010504.** More information, including site names and locations, and station numbers for sites located in the watershed outside of Tennessee, is provided in Appendix IV.

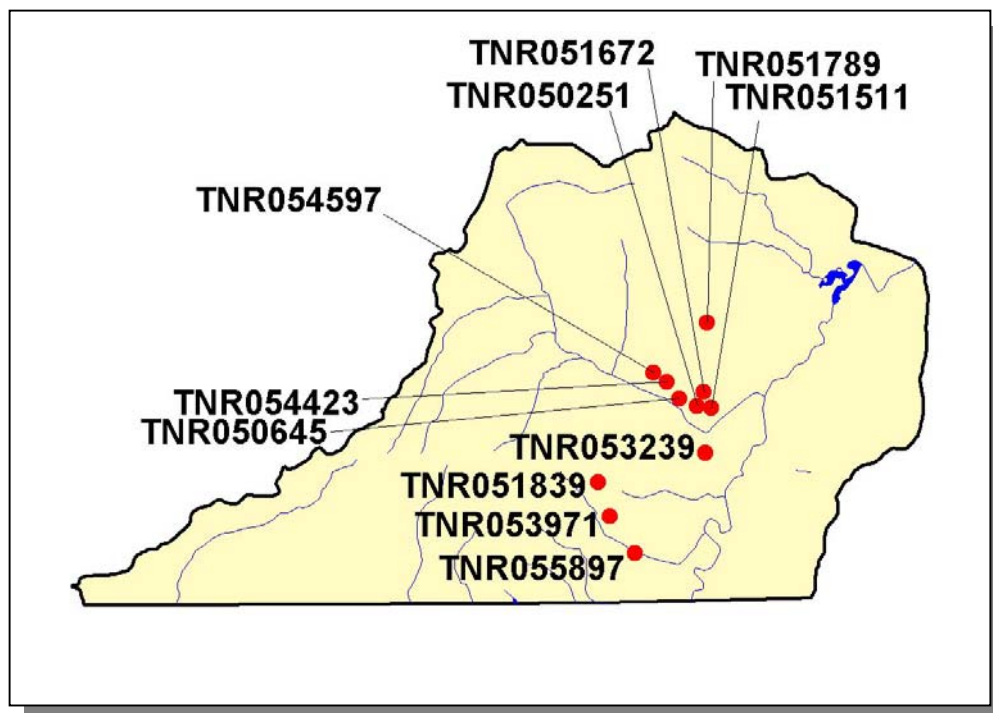
**4.2.A.iv.a. Point Source Contributions.**



**Figure 4-45. Location of Permits Issued in Subwatershed 060200010504.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-46. Location of Active Mining Sites in Subwatershed 060200010504.** More information, including the names of mining operations, is provided in Appendix IV.



**Figure 4-47. Location of TMSP Sites in Subwatershed 060200010504.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.A.iv.b. Nonpoint Source Contributions.**

<b>LIVESTOCK COUNTS</b>				
Beef Cow	Cattle	Milk Cow	Chickens (Broilers Sold)	Hogs
15	33	<5	18,004	<5

**Table 4-39. Summary of Livestock Count Estimates in Subwatershed 060200010504.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

<b>LIVESTOCK COUNTS</b>							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Hamilton	6,913	14,734	801	30	934,564	1,017	109
Marion	4,424	8,939	311	246	3,782,097	279	0

**Table 4-40. Summary of Livestock Count Estimates in Hamilton and Marion Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Hamilton	210.7	210.7	2.2	6.0
Marion				

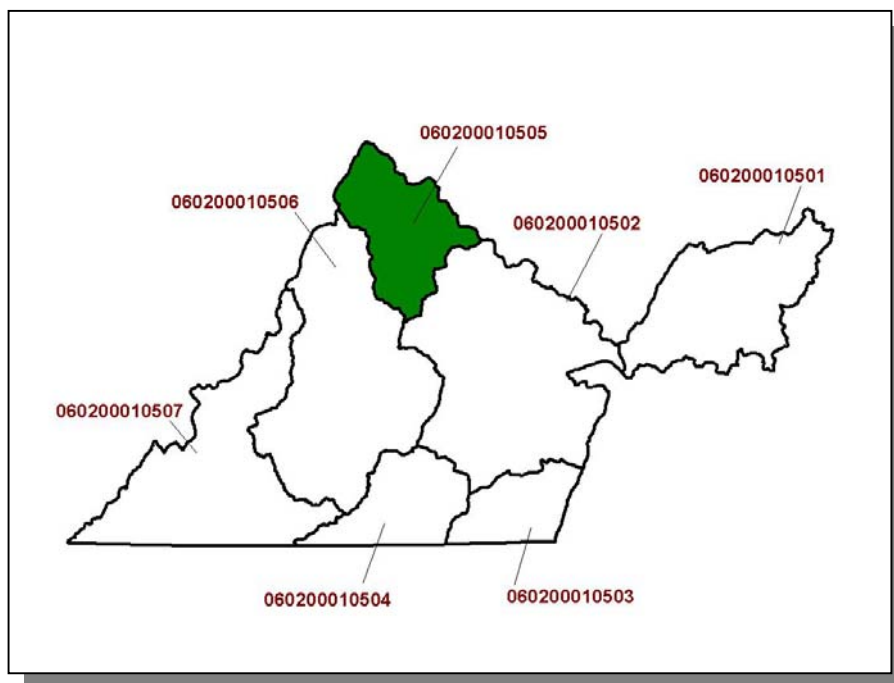
**Table 4-41. Forest Acreage and Annual Removal Rates (1987-1994) in Hamilton and Marion Counties.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Legumes (Pastureland)	0.07
Grass (Pastureland)	0.33
Grass (Hayland)	2.04
Legumes, Grass (Hayland)	0.20
Grass, Forbs, Legumes (Mixed Pasture)	0.27
Corn (Row Crops)	5.28
Potatoes (Row Crops)	5.26
Soybeans (Row Crops)	3.84
Oats (Close-Grown Cropland)	3.13
Wheat (Close-Grown Cropland)	3.14
All Other Close-Grown Cropland	1.99
Other (Horticultural)	0.29
Other Vegetable and Truck Crops	7.28
Other Cropland not Planted	1.26
Farmsteads and Ranch Headquarters	0.09

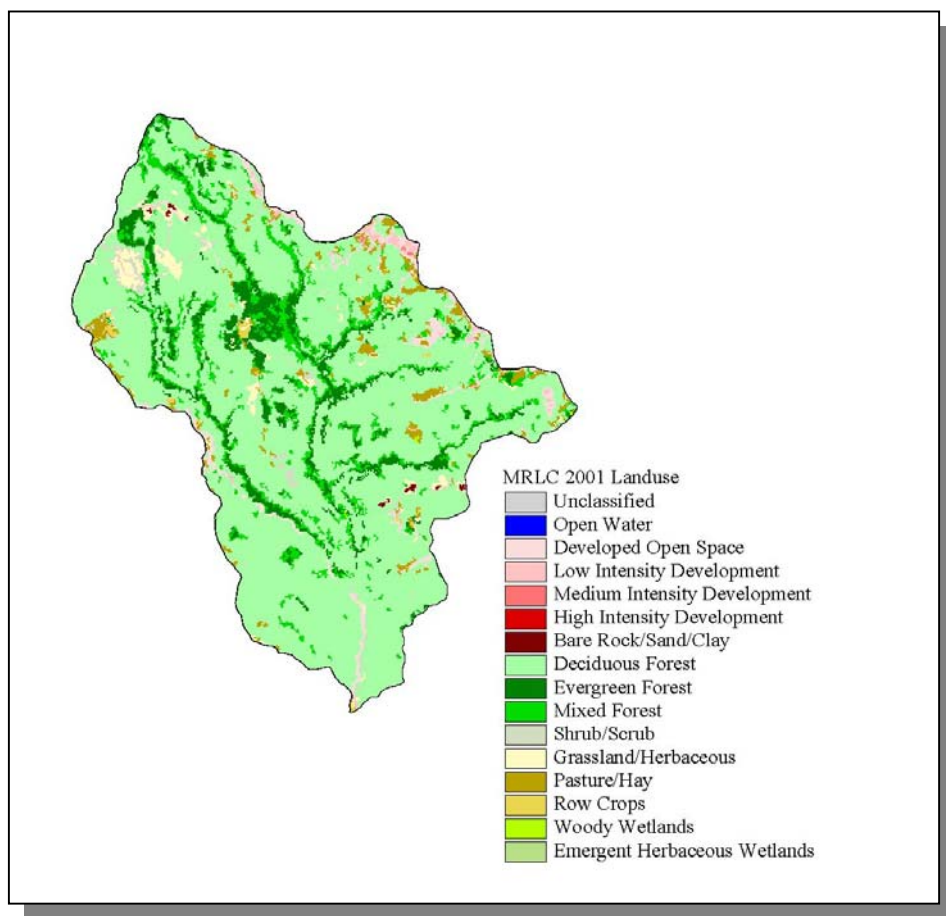
**Table 4-42. Annual Estimated Total Soil Loss in Subwatershed 060200010504.**



**4.2.A.v.** 060200010505 (Suck Creek).

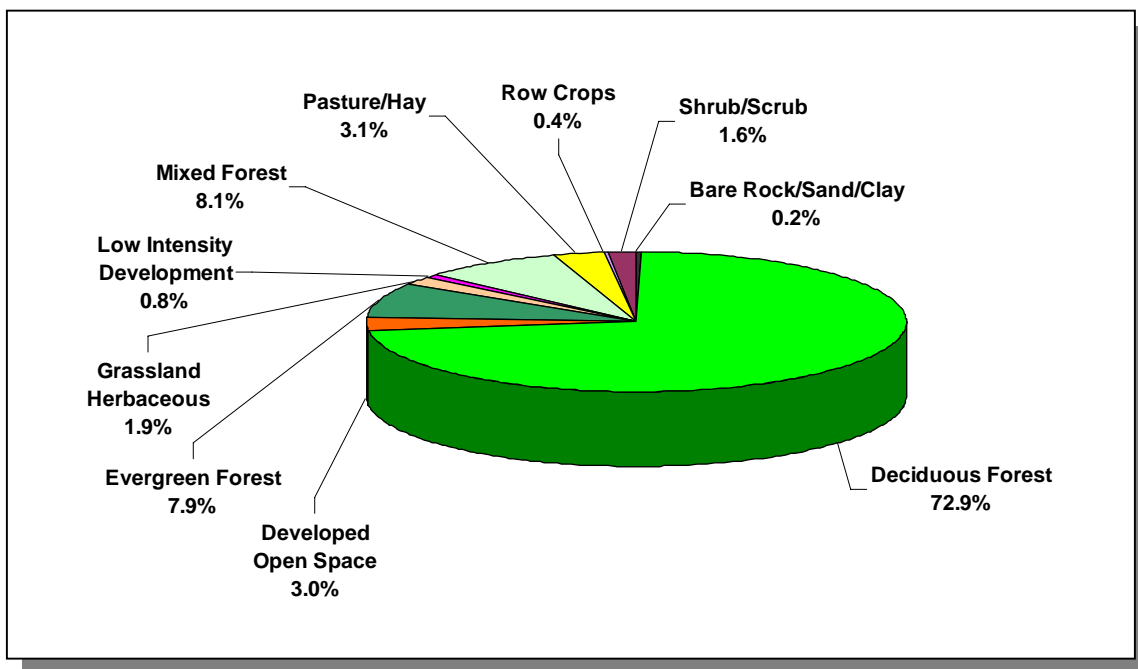


**Figure 4-48. Location of Subwatershed 060200010505.** All Group 4 Lower Tennessee River HUC-12 subwatershed boundaries in Tennessee are shown for reference.



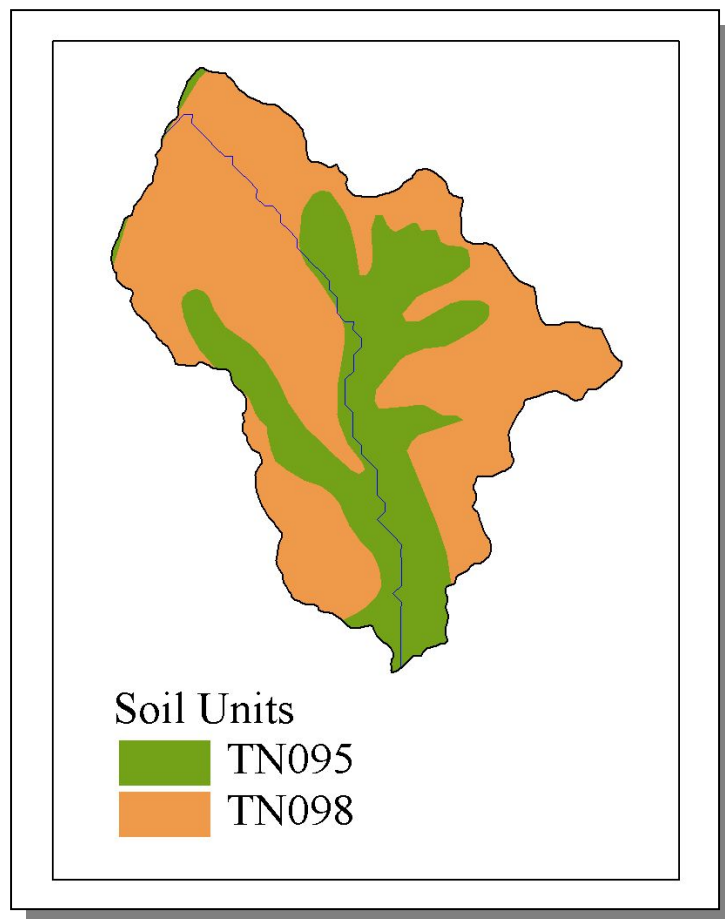
**Figure 4-49. Illustration of Land Use Distribution in Subwatershed 060200010505.**

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**Figure 4-50. Land Use Distribution in Subwatershed 060200010505.** More information is provided in Appendix IV.

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**Figure 4-51. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060200010505.**

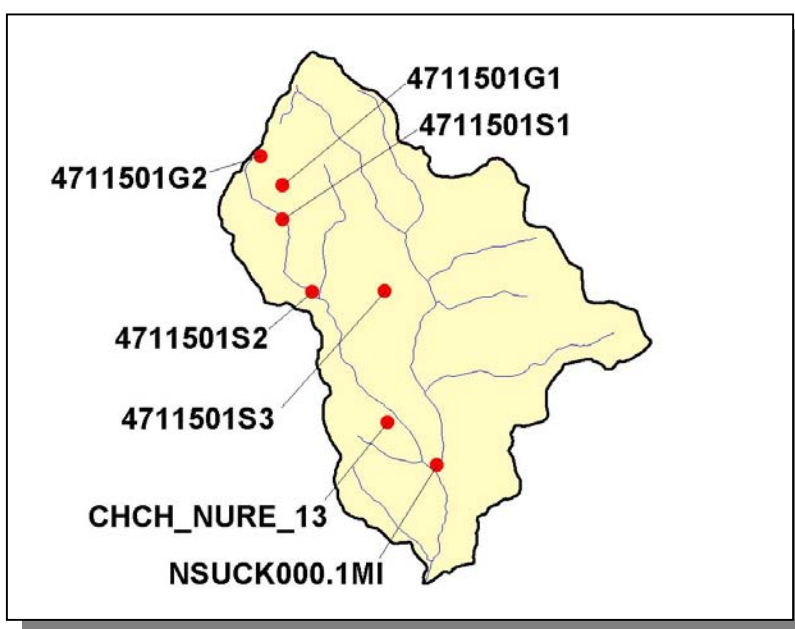
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	3.98	4.82	Loam	0.32

**Table 4-43. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060200010505.** The definition of "Hydrologic Group" is provided in Appendix IV.

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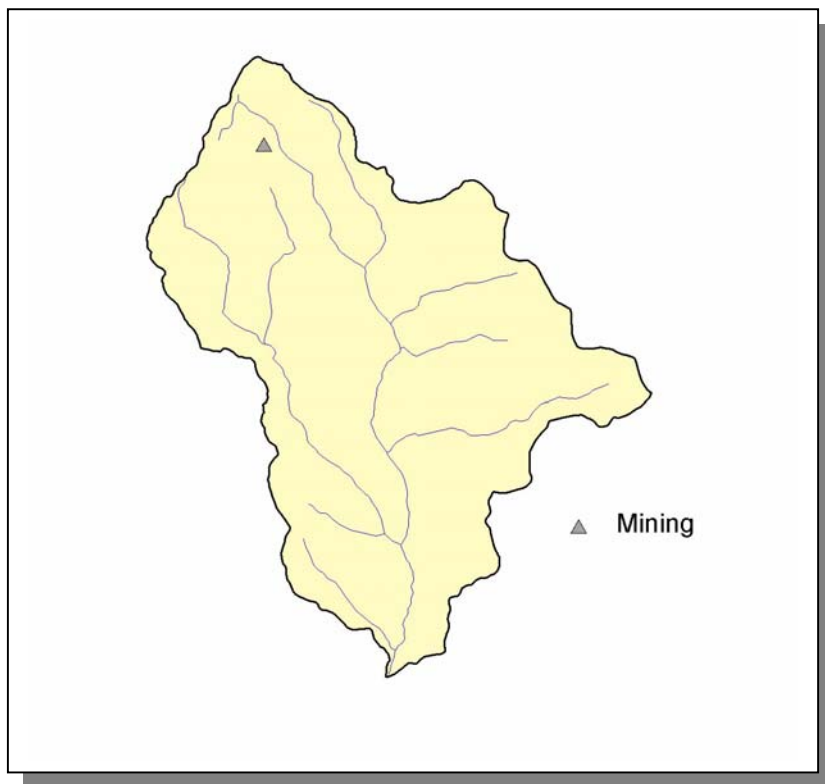
County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Hamilton	285,536	294,865	307,896	0.88	2,512	2,594	2,709	7.8
Marion	24,860	26,674	27,776	2.59	643	690	719	11.8
Sequatchie	8,863	10,119	11,370	1.57	139	159	179	28.8
<b>Total</b>	<b>319,259</b>	<b>331,658</b>	<b>347,042</b>		<b>3,294</b>	<b>3,443</b>	<b>3,607</b>	<b>9.5</b>

**Table 4-44. Population Estimates in Subwatershed 060200010505.**

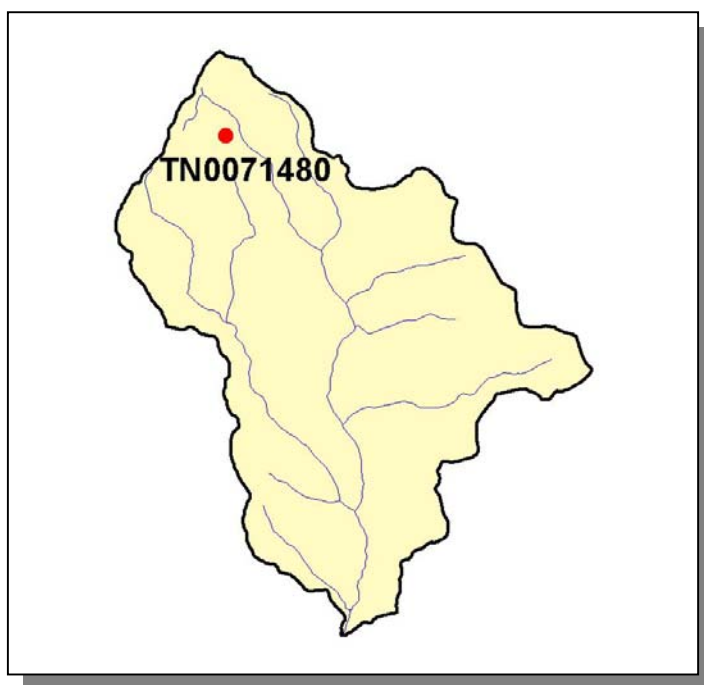


**Figure 4-52. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060200010505.** More information, including site names and locations, and station numbers for sites located in the watershed outside of Tennessee, is provided in Appendix IV.

**4.2.A.v.a. Point Source Contributions.**



**Figure 4-53. Location of Permits Issued in Subwatershed 051301050505.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-54. Location of Active Mining Sites in Subwatershed 060200010505.** More information, including the names of mining operations, is provided in Appendix IV.

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**4.2.A.v.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS				
Beef Cow	Cattle	Milk Cow	Chickens (Broilers Sold)	Hogs
33	76	<5	13,036	<5

**Table 4-45. Summary of Livestock Count Estimates in Subwatershed 060200010505.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Hamilton	6,913	14,734	801	30	934,564	1,017	109
Marion	4,424	8,939	311	246	3,782,097	279	0
Sequatchie	2,763	6,739	221	6	960,000	0	0

**Table 4-46. Summary of Livestock Count Estimates in Hamilton, Marion, and Sequatchie Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Hamilton	210.7	210.7	2.2	6.0
Marion				
Sequatchie	137.3	137.3	0.6	1.2

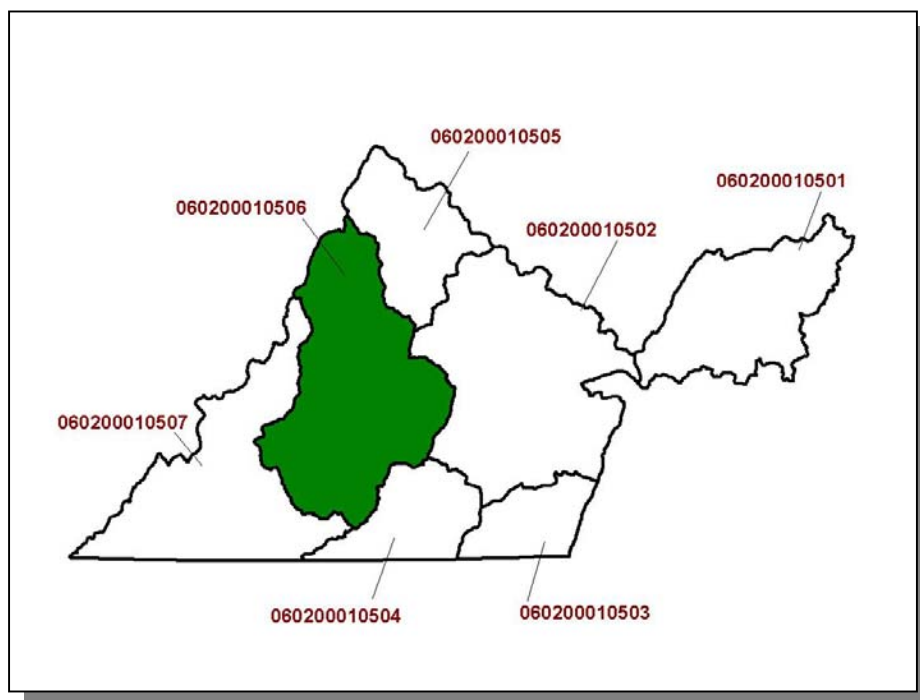
**Table 4-47. Forest Acreage and Annual Removal Rates (1987-1994) in Hamilton, Marion, and Sequatchie Counties.**

CROPS	TONS/ACRE/YEAR
Legumes (Pastureland)	0.07
Grass (Pastureland)	0.64
Grass (Hayland)	1.50
Legumes, Grass (Hayland)	0.21
Grass, Forbs, Legumes (Mixed Pasture)	0.44
Corn (Row Crops)	3.75
Soybeans (Row Crops)	4.56
Oats (Close-Grown Cropland)	3.13
Wheat (Close-Grown Cropland)	3.14
All Other Close-Grown Cropland	1.99
Other (Horticultural)	0.29
Other Vegetable and Truck Crops	7.28
Farmsteads and Ranch Headquarters	0.16

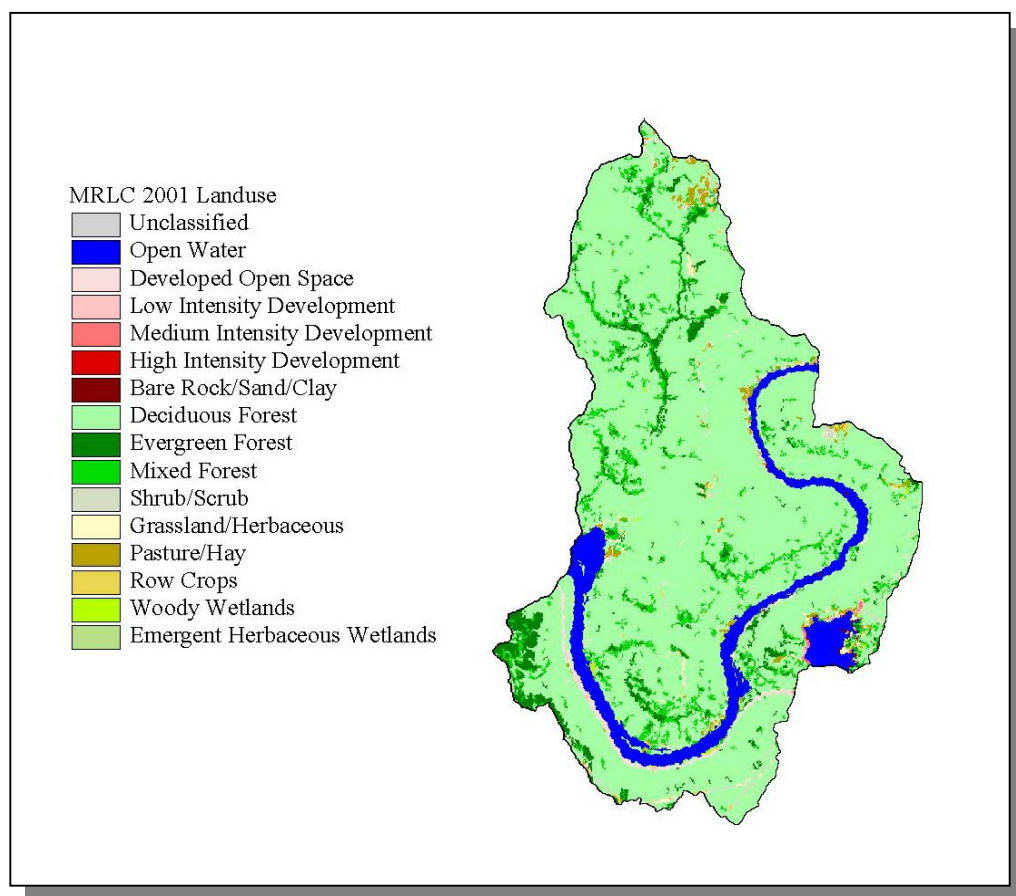
**Table 4-48. Annual Estimated Total Soil Loss in Subwatershed 060200010505.**



**4.2.A.vi. 060200010506 (Tennessee River).**

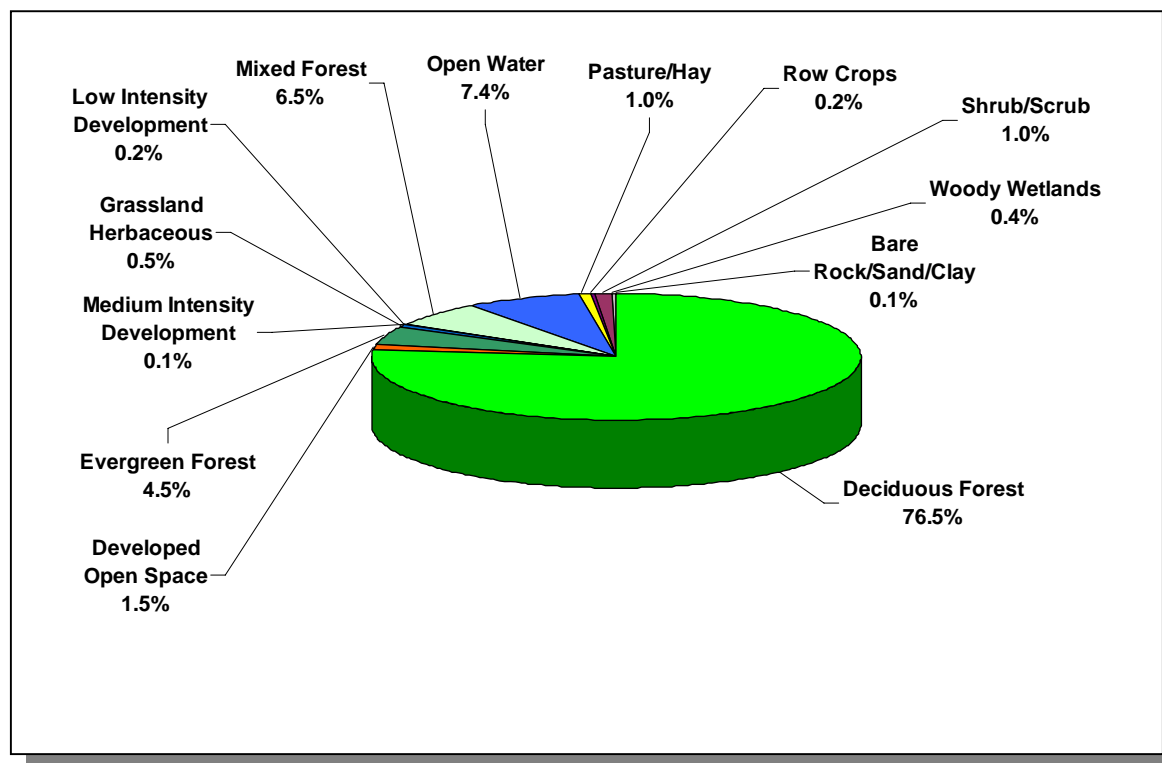


**Figure 4-55. Location of Subwatershed 060200010506.** All Group 4 Lower Tennessee River HUC-12 subwatershed boundaries in Tennessee are shown for reference.



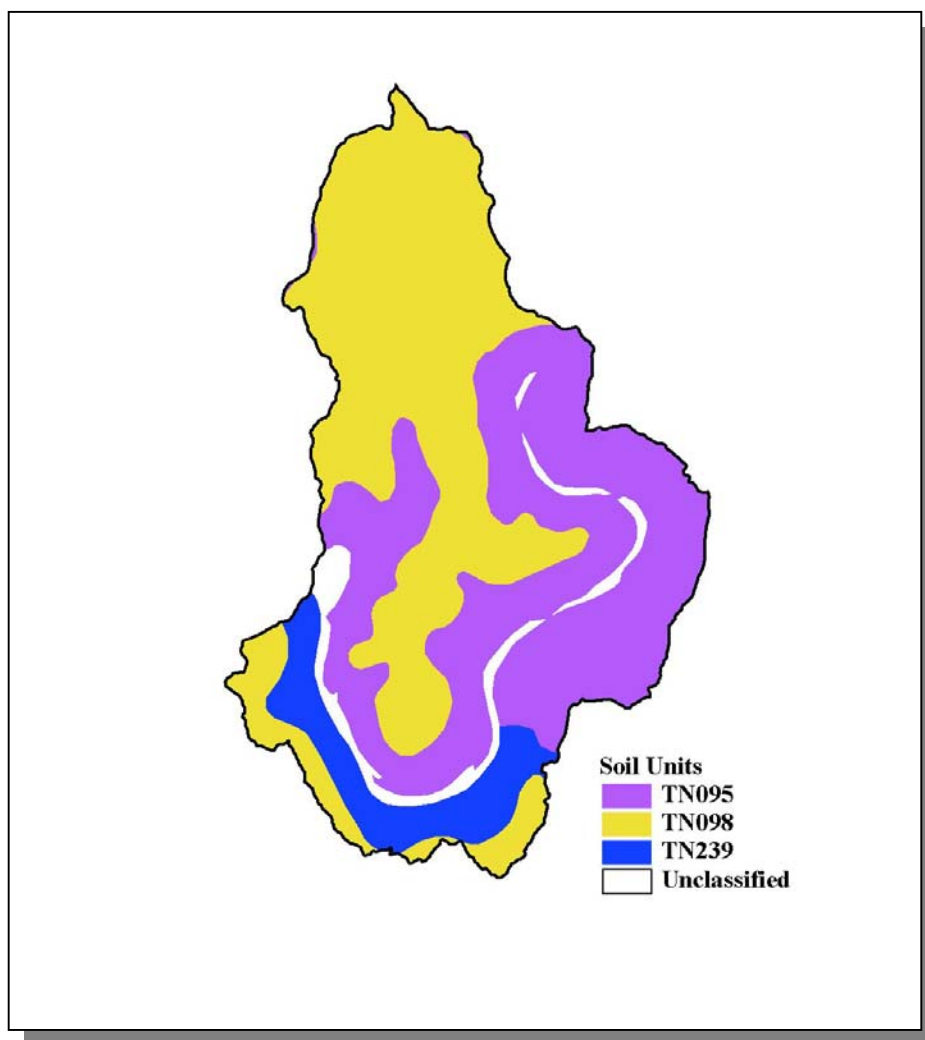
**Figure 4-56. Illustration of Land Use Distribution in Subwatershed 060200010506.**

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*Figure 4-57. Land Use Distribution in Subwatershed 060200010506. More information is provided in Appendix IV.*

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**Figure 4-58. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060200010506.**

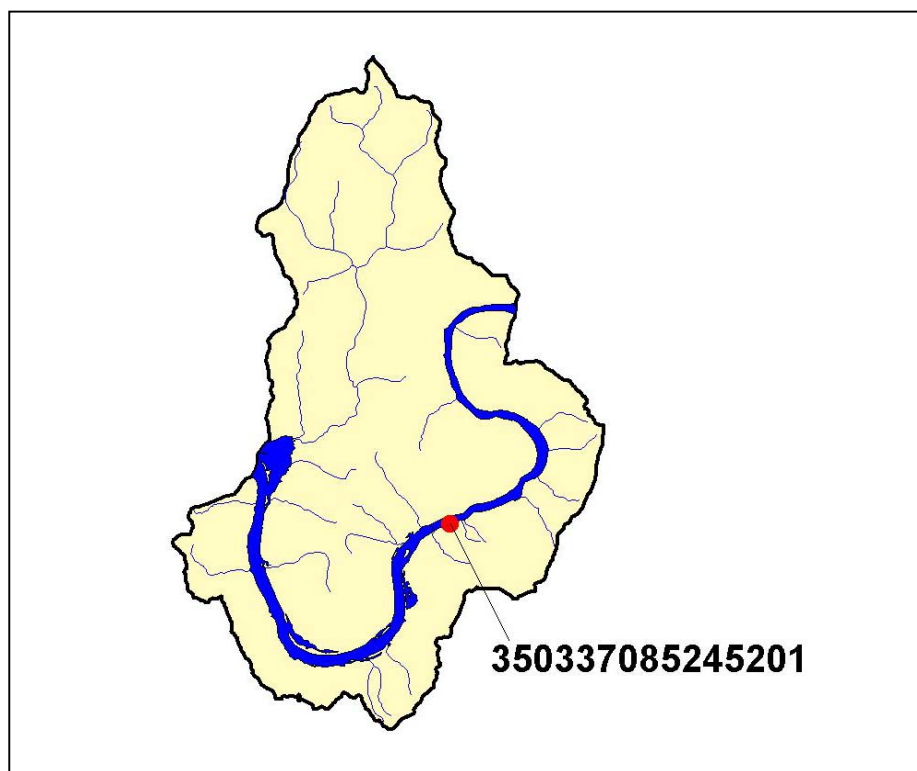
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	3.98	4.82	Loam	0.32
TN239	2.00	C	2.94	4.86	Loam	0.22

**Table 4-49. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060200010506.** The definition of "Hydrologic Group" is provided in Appendix IV.

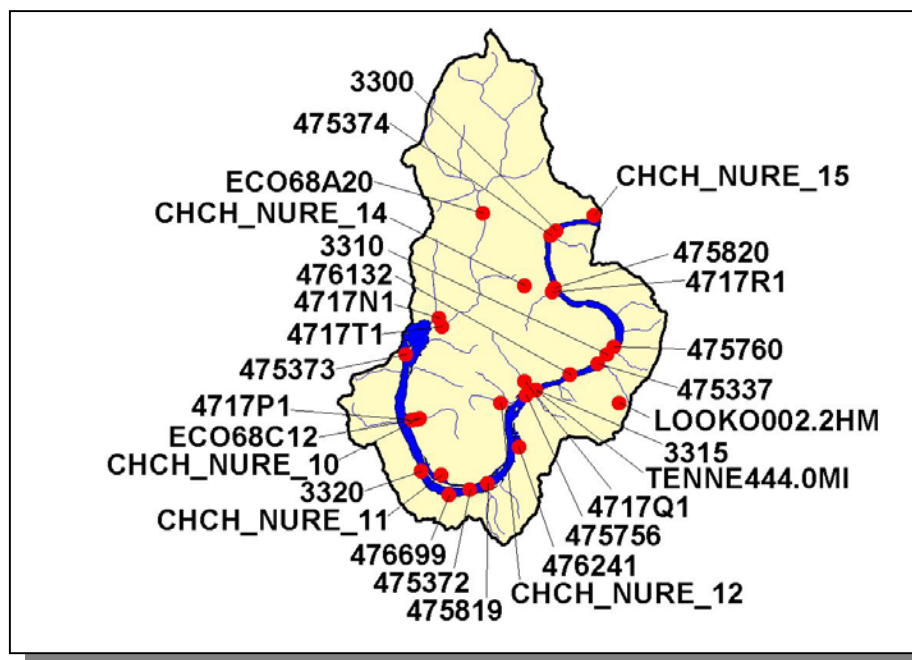
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Hamilton	285,536	294,865	307,896	0.32	922	952	994	7.8
Marion	24,860	26,674	27,776	10.54	2,620	2,811	2,928	11.8
<b>Total</b>	<b>310,396</b>	<b>321,539</b>	<b>335,672</b>		<b>3,542</b>	<b>3,763</b>	<b>3,922</b>	<b>10.7</b>

*Table 4-50. Population Estimates in Subwatershed 060200010506.*



**Figure 4-59. Location of Historical Streamflow Data Collection Sites in Subwatershed 060200010506.** More information is provided in Appendix IV.



**Figure 4-60. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060200010506.** More information, including site names and locations, and station numbers for sites located in the watershed outside of Tennessee, is provided in Appendix IV.

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**4.2.A.vi.a. Point Source Contributions.**

There are no point sources in this subwatershed.

**4.2.A.vi.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS				
Beef Cow	Cattle	Milk Cow	Chickens (Broilers Sold)	Hogs
17	35	<5	13,528	<5

**Table 4-51. Summary of Livestock Count Estimates in Subwatershed 060200010506.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Hamilton	6,913	14,734	801	30	934,564	1,017	109
Marion	4,424	8,939	311	246	3,782,097	279	0

**Table 4-52. Summary of Livestock Count Estimates in Hamilton and Marion Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Hamilton	210.7	210.7	2.2	6.0
Marion				

**Table 4-53. Forest Acreage and Annual Removal Rates (1987-1994) in Hamilton and Marion Counties.**

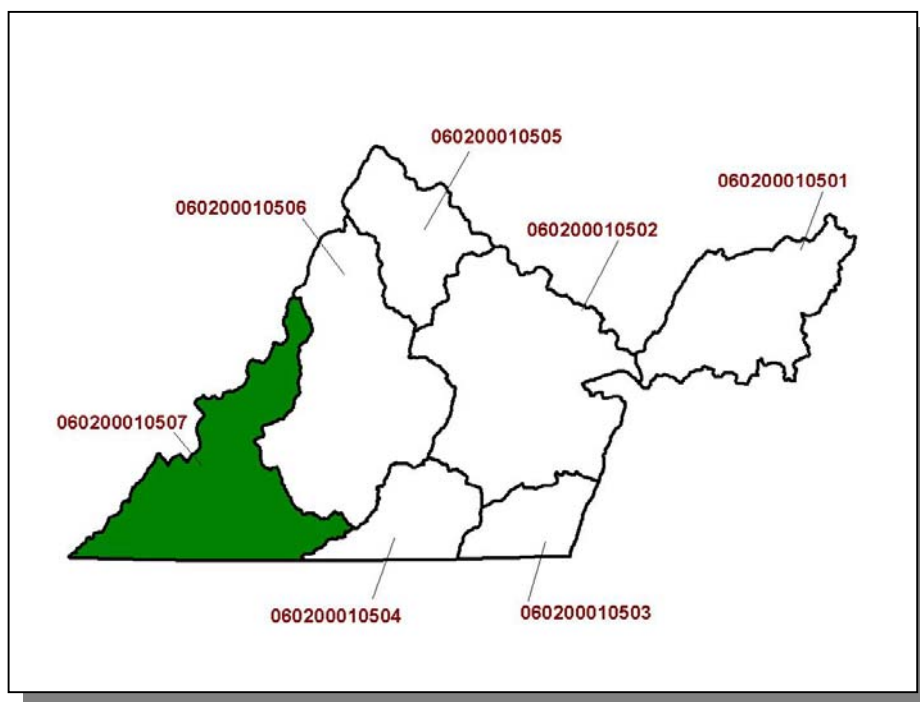
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<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Legumes (Pastureland)	0.07
Grass (Pastureland)	0.61
Grass (Hayland)	2.33
Legumes, Grass (Hayland)	0.20
Grass, Forbs, Legumes (Mixed Pasture)	0.29
Corn (Row Crops)	3.61
Soybeans (Row Crops)	4.56
Oats (Close-Grown Cropland)	3.13
Wheat (Close-Grown Cropland)	3.14
All Other Close-Grown Cropland	1.99
Other (Horticultural)	0.29
Other Vegetable and Truck Crops	7.28
Farmsteads and Ranch Headquarters	0.19

**Table 4-54. Annual Estimated Total Soil Loss in Subwatershed 060200010506.**

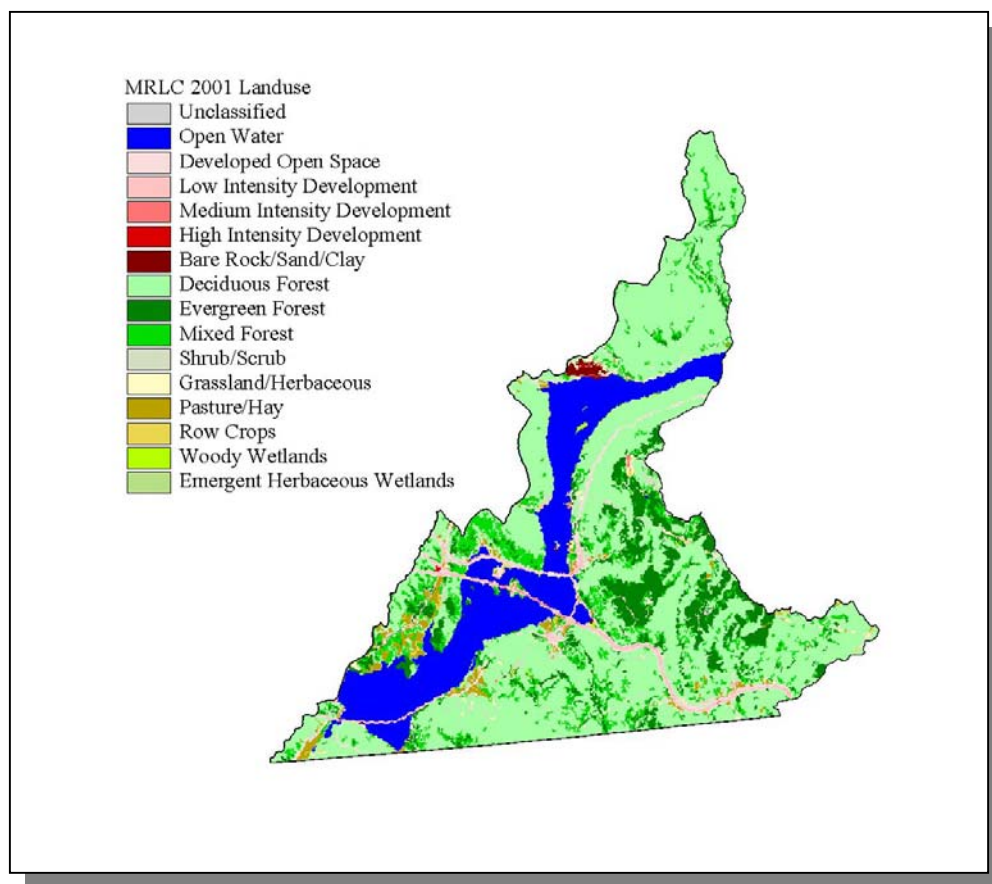


**4.2.A.vii. 060200010507 (Tennessee River).**



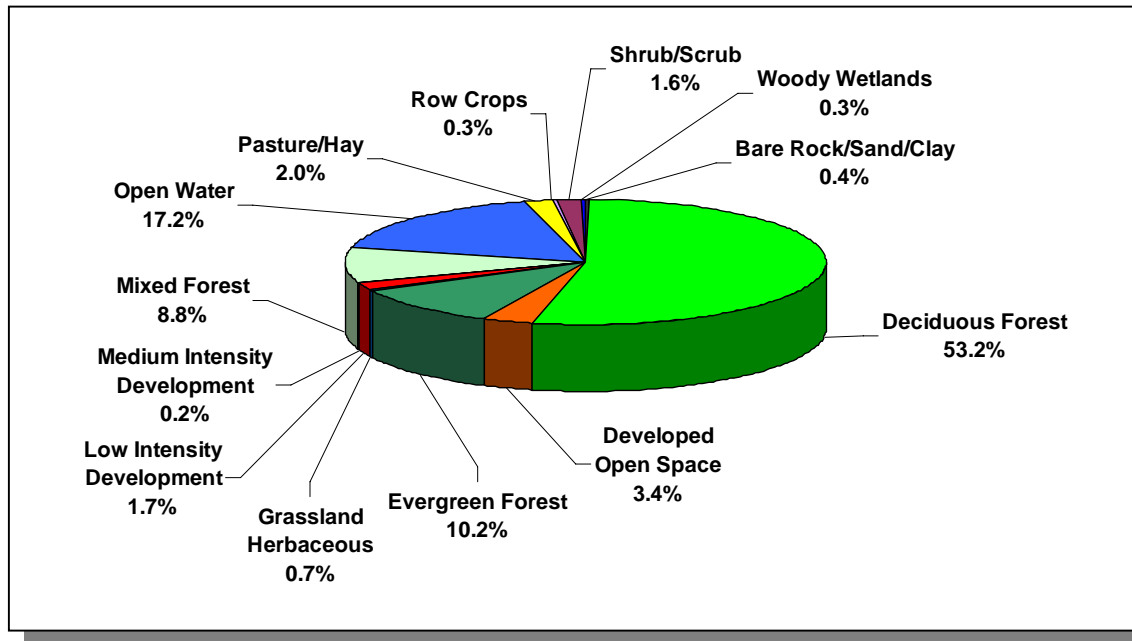
**Figure 4-61. Location of Subwatershed 060200010507.** All Group 4 Lower Tennessee River HUC-12 subwatershed boundaries in Tennessee are shown for reference.

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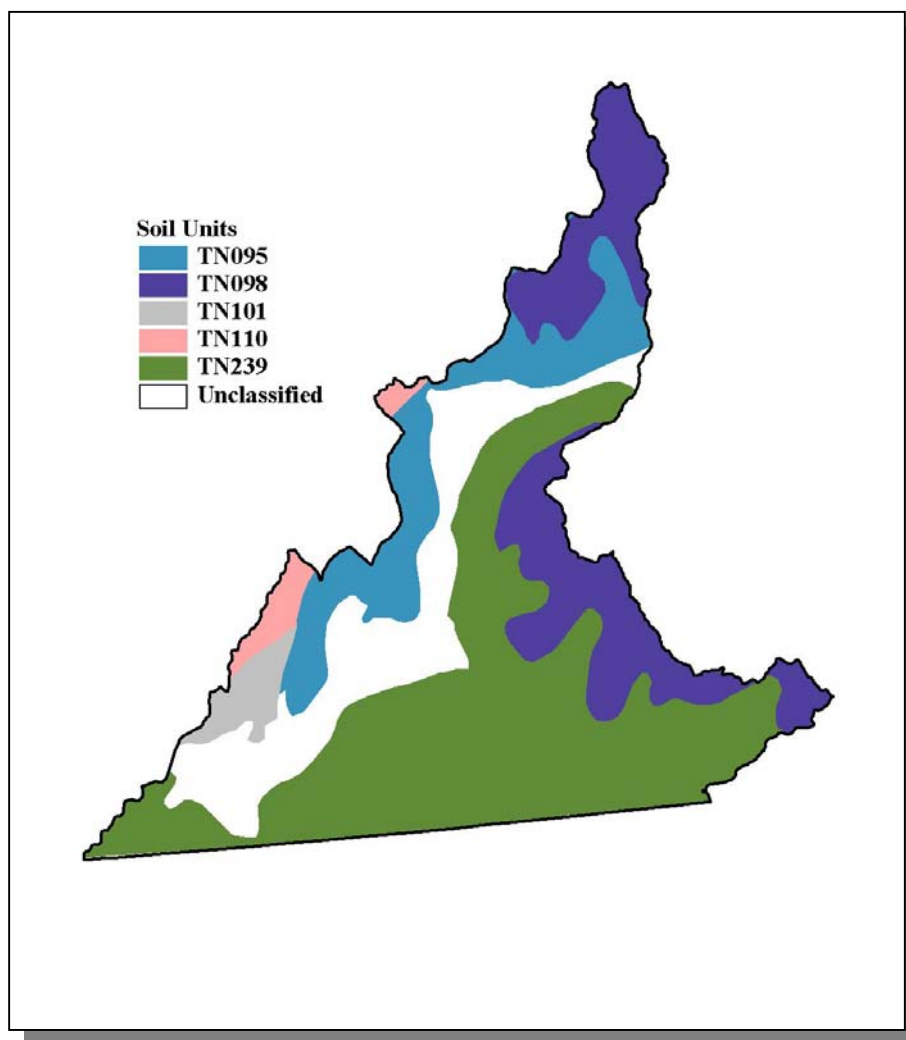
**Figure 4-62. Illustration of Land Use Distribution in Subwatershed 060200010507.**

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**Figure 4-63. Land Use Distribution in Subwatershed 060200010507.** More information is provided in Appendix IV.

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**Figure 4-64. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060200010507.**

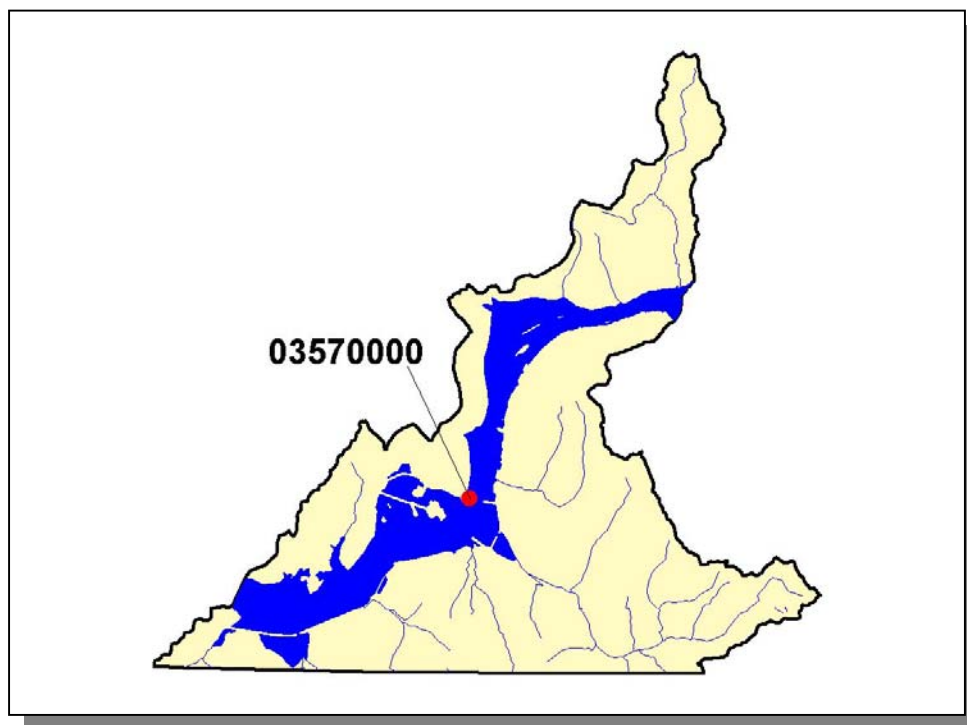
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	3.98	4.82	Loam	0.32
TN101	0.00	B	1.71	5.39	Loam	0.35
TN110	0.00	B	2.22	4.96	Loam	0.31
TN239	2.00	C	2.94	4.86	Loam	0.22

**Table 4-55. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060200010507.** The definition of "Hydrologic Group" is provided in Appendix IV.

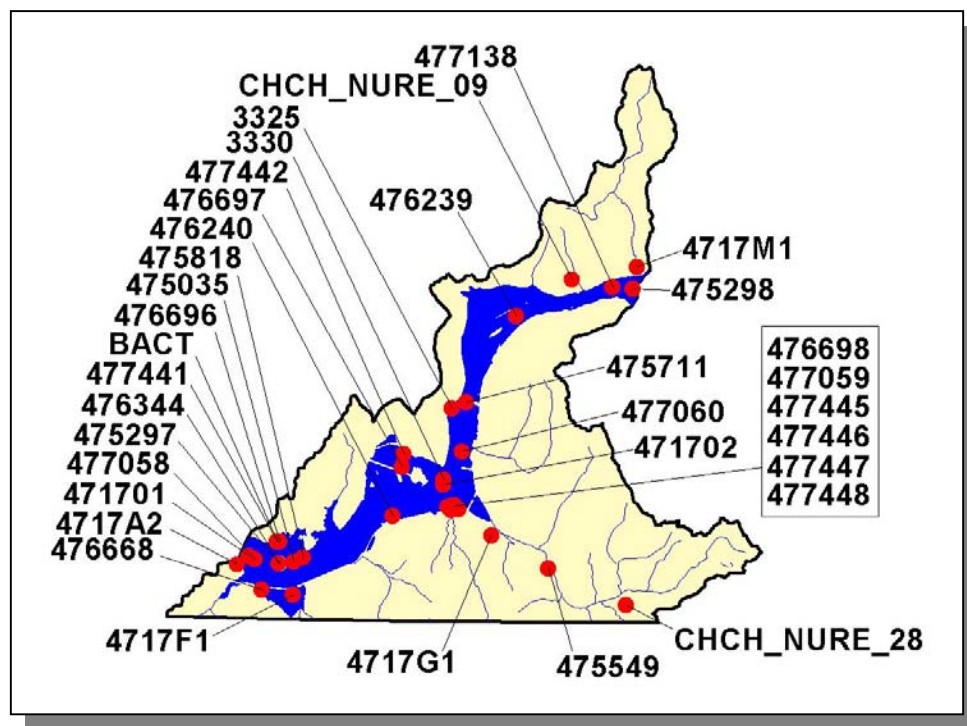
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Hamilton	285,536	294,865	307,896	0.13	364	376	392	7.7
Marion	24,860	26,674	27,776	8.07	2,006	2,152	2,241	11.7
<b>Total</b>	<b>310,396</b>	<b>321,539</b>	<b>335,672</b>		<b>2,370</b>	<b>2,528</b>	<b>2,633</b>	<b>11.1</b>

*Table 4-56. Population Estimates in Subwatershed 060200010507.*

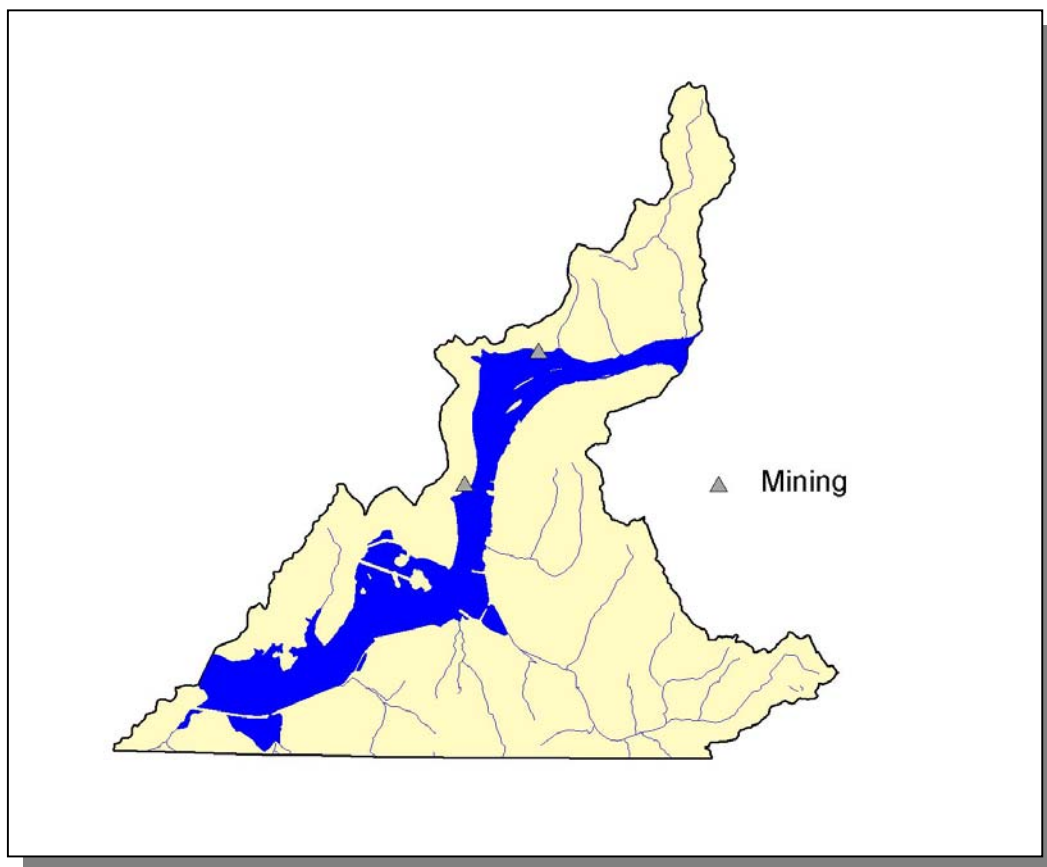


**Figure 4-65. Location of Historical Streamflow Data Collection Sites in Subwatershed 060200010507.** More information is provided in Appendix IV.



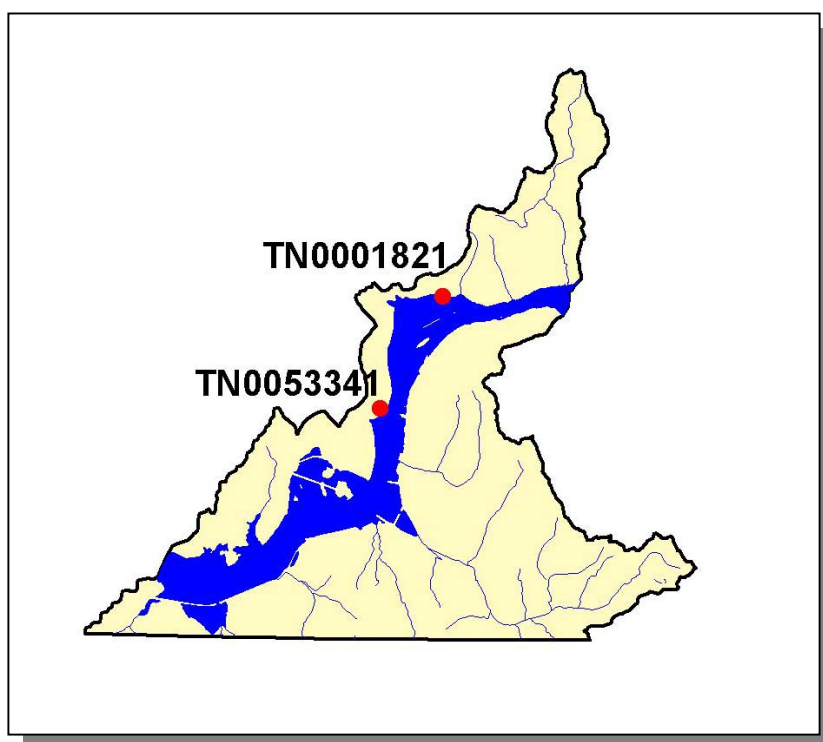
**Figure 4-66. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060200010507.** More information, including site names and locations, and station numbers for sites located in the watershed outside of Tennessee, is provided in Appendix IV.

**4.2.A.vii.a. Point Source Contributions.**



**Figure 4-67. Location of Permits Issued in Subwatershed 051301050507.** More information, including the names of facilities, is provided in Appendix IV.

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**Figure 4-68. Location of Active Mining Sites in Subwatershed 060200010507.** More information, including the names of mining operations, is provided in Appendix IV.



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**4.2.A.viii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS				
Beef Cow	Cattle	Milk Cow	Chickens (Broilers Sold)	Hogs
91	184	6	81,376	6

**Table 4-57. Summary of Livestock Count Estimates in Subwatershed 060200010507.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Hamilton	6,913	14,734	801	30	934,564	1,017	109
Marion	4,424	8,939	311	246	3,782,097	279	0

**Table 4-58. Summary of Livestock Count Estimates in Hamilton and Marion Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Hamilton	210.7	210.7	2.2	6.0
Marion				

**Table 4-59. Forest Acreage and Annual Removal Rates (1987-1994) in Hamilton and Marion Counties.**

CROPS	TONS/ACRE/YEAR
Legumes (Pastureland)	0.07
Grass (Pastureland)	0.59
Grass (Hayland)	0.84
Legumes, Grass (Hayland)	0.20
Grass, Forbs, Legumes (Mixed Pasture)	0.29
Corn (Row Crops)	3.58
Potatoes (Row Crops)	5.26
Soybeans (Row Crops)	4.51
Oats (Close Grown Cropland)	3.13
Wheat (Close-Grown Cropland)	3.14
All Other Close-Grown Cropland	1.99
Other (Horticultural)	0.29
Other Vegetable and Truck Crops	7.28
Other Cropland not Planted	1.26
Farmsteads and Ranch Headquarters	0.18

**Table 4-60. Annual Estimated Total Soil Loss in Subwatershed 060200010507.**